Reviewing and improving our public consultation process

Appendix 7a

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Appendix 7a

European Grid Report: Beyond Public Opposition - Lessons Learned Across Europe

Renewables Grid Initiative

EUROPEAN GRID REPORT

Beyond Public Opposition
Lessons Learned Across Europe

Renewables Grid Initiative

Imprint
The Renewables-Grid-Initiative is managed and legally represented by Renewables Grid gUG.

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List of Abbreviations

BBL ..... Bond Beter Leefmilieu (Federation for a Better Environment; Belgium)
BNetzA ..... Bundesnetzagentur (Federal Network Agency; Germany)
CCW ..... Countryside Council for Wales
CLER ..... Comité de Liaison Energies Renouvelables (Committee for Renewable Energy; France)
CNA ..... Comité National Avifaune (National Committee on Bird Protection; France)
CNDP ..... Commission Nationale du Débat Public (National Commission for Public Debate; France)
CRE..... Commission de Régulation de l'Énergie (Energy Regulations Commission; France)
DCE ..... Département Concertation et Environnement (Stakeholders and Environment Department; France)
dena ..... Deutsche Energie-Agentur GmbH (German Energy Agency)
DSO ..... Distribution System Operator
DUH ..... Deutsche Umwelthilfe (German Environmental Aid; Germany)
DUP ..... Declaration of Public Interest
EDF ..... Électricité de France (French energy producer)
EIA ..... Environmental Impact Assessment
EMF ..... Electromagnetic Fields
EnLAG ..... Energieleitungsausbaugesetz (Energy Grid Extension Act; Germany)
ERDF ..... Électricité Réseau Distribution France (French DSO)
ERPA ..... Exclusion, Repulsion, Problem, Attraction (Italy=
EU ..... European Union
FAQ ..... Frequently Asked Questions
FNE ..... France Nature Environnement

GRUP ..... Gewestelijk Ruimtelijk Uitvoeringsplan (Regional land-use plan; the Netherlands)
HVDC ..... High Voltage Direct Current
IET ..... Institution of Energy and Technology (The UK)
ISO ..... International Standardisation Organisation
LCF ..... Local Community Forums
LIPU ..... Lega Italiana Protezione Uccelli (Italian BirdLife branch)
LNE ..... Departement Leefmilieu, Natuur en Energie (Flemish Environment, Nature and Energy Department; Belgium)
LPO ..... Ligue pour la Protection des Oiseaux (French BirdLife branch)
MER ..... Milieueffectrapportagebeheer (Environmental Impact Assessment)
MoU ..... Memorandum of Understanding
NABEG ..... Netzausbaubeschleunigungsgesetz (Grid Extension Acceleration Act; Germany)
NCEA ..... Netherlands Commission for Environmental Assessment
NGO ..... Non-Governmental Organisation
NID ..... National Infrastructure Directorate
NSIPs ..... Nationally significant infrastructure projects
NVE ..... Norges vassdrags- og energidirektorat (Norwegian Water Resources and Energy Directorate; regulator)
OHL ..... Overhead lines
PAP ..... Project Accompanying Plan (France)
PEIR ..... Preliminary Environmental Information Report (The UK)
PPA ..... Planning Performance Agreement (The UK)
Q&As ..... Questions and answers
RAVON ..... Reptielen Amfibieën en Vissen Onderzoek Nederland (Reptile, Amphibian and Fish Conservation Netherlands)
RGI ..... Renewables-Grid-Initiative
RSPB ..... Royal Society for the Protection of Birds (The UK)
RTE ..... Réseau de Transport d'Électricité (French TSO)
RTPI ..... Royal Town Planning Institute (The UK)
SAGE ..... Stakeholder Advisory Group on Electromagnetic Fields (The UK)
SCF ..... Strategic Community Forum (The UK)
SEA ..... Strategic Environmental Assessment

SEV .....Structuurschema elektriciteitsvoorziening (Framework plan of electricity supply; the Netherlands)

SOCC .....Statement of Community Consultation (The UK)

TSO .....Transmission System Operator

UK .....United Kingdom of Great Britain and Northern Ireland

WWF.....World Wide Fund for Nature

1 Introduction

The European Union has set the stage for a significant increase in the use of renewable energy sources driven by the adoption of its 20-20-20 targets and the objective of creating a largely decarbonised power sector by 2050. Expanding and upgrading the ageing grid infrastructure is vital to achieving the European Union's ambitious energy and climate targets. The EU Commission argues in the Green Paper, "Towards a secure, sustainable and competitive European Energy network"[1], that "Europe's energy networks are the very arteries we depend on to fuel our homes, businesses and the daily activities we cherish." However, the EU will not achieve its goals unless its energy networks are changed considerably and fast.

A broad consensus underscores the need to increasingly develop and utilise renewable energy sources. The upgrade and expansion of the European energy grids is indispensible in this quest. At the same time, it is clear that the issue ofhow to efficiently and effectively realise the required projects remains inadequately solved. One key obstacle to proposed grid expansion projects is local opposition traced to environmental and social concerns.

The Renewables-Grid-Initiative (RGI) brings together two of the main stakeholders from eight different countries in this debate – non-governmental organisations (NGOs) and transmission system operators (TSOs). These groups collectively endorse the effective integration of 100% renewable electricity into the European grid.

In 2011, the "European Grid Declaration on Electricity Network Development and Nature Conservation"[2] was developed under the guidance of RGI. The 29 signatories acknowledge the need to reconcile the expansion of the energy grid with local environmental concerns. The Declaration also contends that one prerequisite to overcoming public opposition is the implementation of sweeping environmental legislation across the EU, which subsequently contribute to achieving tangible targets, such as halting the loss of biodiversity by 2020. Throughout 2012, RGI has developed an extension of the European Grid Declaration. It addresses

[1] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2008:0782:FIN:EN:PDF

[2] http://renewables-grid.eu/documents/eu-grid-declaration.html

transparency and public participation issues. The goal is to hone in on solutions to develop the new grid capacity.
Many of the ideas in the two parts of the Declaration are already being considered and tested by the members of the Renewables-Grid-Initiative. This report aims to enhance and stimulate the use of "better practice" based on the principles presented in the 2011 and 2012 European Grid Declaration. This is accomplished by contributing to the exchange of ideas and lessons on better practice designed to support a swifter implementation of successfully proven concepts. Sharing information on what has been attempted, what has worked and what requires further analysis will hopefully encourage the adoption of "best practice".

The report publishes measures taken by different RGI members, while providing a comprehensive overview of ongoing activities and relevant experiences that have been gathered. It therefore is a substantial contribution to a joint learning exercise. Furthermore, this report introduces new promising activities, the impact of which can only be assessed in the future. Some of these new approaches are still taking shape, due to the fresh challenges that RGI members are continuously facing.

This report should not be considered as the final deliverable of this project, rather as the beginning of a systematic assessment of best practices, their fundamental success elements, and lessons learned by the parties engaged in the analysed process.

1.1. Scope and methodology

In an initial analysis, the RGI secretariat identified best practices and potential improvements were in a literature review. During a kick-off meeting in Berlin and a subsequent two-day workshop in Lysebu, near Oslo, case studies were presented by TSO and NGO members for discussion in a broader group. Participants included Norwegian NGOs, such as Bellona and Zero.

In a second step, the RGI Secretariat conducted interviews [3] with TSO partners and local NGOs in seven European countries in order to (a) validate and comment on the best practices identified in literature and (b) contribute case studies of experiences from concrete projects. The authors developed the following questions to determine which cases should serve as examples: (a) from which cases did you learn the most (b) from which cases can others learn the most (c) where did you try out new approaches. On these cases, in-depth interviews of 3-5 hours were conducted.[4]

[3] List of interview partners in Annex III, p.111
[4] Qestionnaire in Annex II, p.107

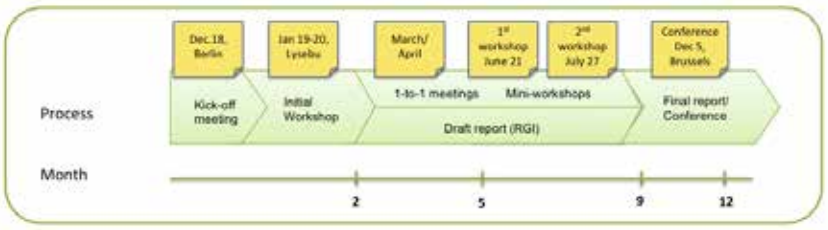


Figure 1: Overview of the project process

Two mini-workshops among RGI members were held after the interviews to discuss the cases. The workshops covered topics regarding transparency, public participation and enhanced consideration of environmental matters. In joint discussions, participants identified lessons learned from presented cases.[5]

The authors of this report developed a framework to analyse selected cases and to promote a structured discussion. The different stages of planning a new grid line were the first aspects to be analysed. Following the guidelines established in the study "Permitting procedures for energy infrastructure projects in the EU"[6] by Roland Berger, three phases were examined: need determination, spatial planning, and permitting. The need determination forms the very beginning of each grid expansion project. When a TSO is confronted with a capacity bottleneck in transmitting contracted electricity, a multitude of options are evaluated. Solutions considered include the possibility of optimising and reinforcing the existing infrastructure and the construction of new power lines.

Once the need has been established, the associated spatial consideration is assessed. This normally involves various corridor options for a proposed line.

Afterwards, the formal permitting procedure takes place, which results in a firm decision on the route and granting of the required permits by the authority. Finally, the implementation phase of a grid development project occurs. This phase was excluded from the scope of this project, but it also needs to be actively managed.

Within these three phases, best practices were analysed along the dimensions of (a) interaction with external stakeholders in dealing with community concerns and (b) further factors that enhance better practice, for instance TSO internal measures or recent legislative developments, which specifically enhance good practices. When considering the involvement of different stakeholder groups, a focus was set on environmental NGOs, the public and authorities. In addition, TSOs were interviewed with respect to what enabled a necessary internal change of culture and procedures.

[5] Summaries of the workshops: http://renewables-grid.eu/activities/best-practices.html
[6] http://ec.europa.eu/energy/infrastructure/studies/doc/2011_ten_e_permitting_report.pdf

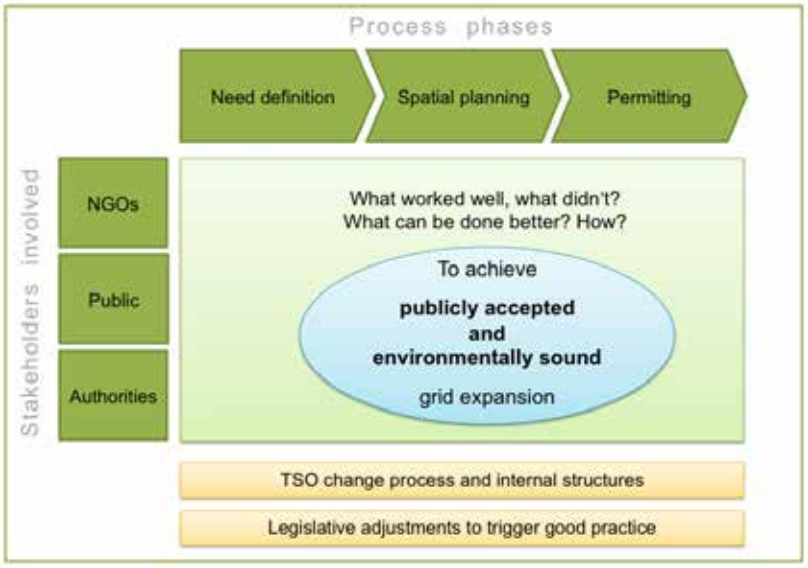


Figure 2: Framework of analysis

This report covers seven countries[7] and summarises findings from the literature, interviews and mini-workshop discussions. Thanks to experience made in different case studies, very practical examples of how challenges can be dealt with in projects on the ground are highlighted. Within the chapters, these examples can be found in green boxes. At the beginning of each chapter, a chart gives an overview over the most important process steps in the national planning and permitting of a new extra high voltage line in the respective country.

The chapters are divided into the three sub-chapters "Planning and Approval Process and Interaction with Stakeholders", "Nature Conservation and Environment", and "Change Process and TSO Internal Structures".

As explained in chapter 1.1, this report supports RGI's mission to achieve the full integration of renewable energy into the European grid. Nonetheless, the cases presented in the interviews were not limited exclusively to the connection of renewable energy projects to the grid. This decision was taken for two reasons: (a) because learning from "non-renewable" projects can also be of high relevance for other projects, (b) power-lines that do not primarily transport energy from renewable sources likewise need to be built in a way that addresses environmental and societal concerns. The interviews, however, have shown that the type of energy transmitted plays a substantial role in discussions with the population and environmental NGOs.

[7] Belgium, France, Germany, Italy, the Netherlands, Norway, UK

2 Challenges

Even though the public increasingly understands and supports the need for new grids, opposition to specific grid projects remains high. This is often driven by health concerns, economic or environmental impacts, anxiety, or a desire to challenge the need of a specific line. Despite the legal requirement to focus on cost-efficient approaches, Transmission System Operators (TSOs) concede that they need to increasingly make substantial efforts to address stakeholders' different concerns. TSOs recognise that these efforts pay off in reducing conflicts and speeding-up grid development processes. Thus, they should be an integral part of efficient grid development.

2.1. Planning and Approval Process and Interaction with Stakeholders

The interviews have shown that TSOs all over Europe face similar challenges concerning the involvement of different stakeholder groups during the planning and permitting of grid expansion projects. At the same time, NGOs from these countries are confronted with similar issues when they are involved in the projects. The challenges faced by the TSOs and NGOs will be introduced in the following chapter.

Need definition

Need discussion, need communication and cooperation

During the planning and permitting process of a new electricity grid project, challenges occur at each step. This often starts with expressed doubts about the necessity of a new power-line. A common fear is that a line might be built primarily for the economic benefit of a TSO or the energy industry. However, this fear decreases the more people know about the independence of TSOs from utilities. Moreover, the question of alternative solutions that could make a project obsolete is often raised. Before showing support, NGOs in favour of renewable energy expansion often want to make sure other solutions, such as reduced energy consumption or increased decentralised production, cannot displace the need for a new line. There may also be doubts that renewables, rather than other forms of power generation such as nuclear or fossil fuels, have made the new line necessary.

The entire need definition used to be – and in some countries this is still the case – an internal responsibility of the TSO that would not involve external participants. The public was

informed and consulted only after a corridor or even the exact line had been determined. When people found out about a project, they did not feel that the need question was sufficiently answered ex ante.

Many TSOs and regulators have recognised this challenge and are working on changing their approach to involve stakeholders at an earlier stage when the need issue is being discussed. In some countries, the legislative framework has been changed in this direction, too.

Examples addressing this challenge:
- The public is continuously involved during the preparation of a grid development plan in Germany (Germany Box 1, p.42)
- Statnett has changed its approach towards earlier stakeholder involvement and discussion on the need of a project in the Nettplan Stor Oslo project (Norway Box 1 & 2, p.75)
- RTE initiates discussions with external stakeholders in the "Grid-Perspectives"-committee of RTE (France Box 1, p.31)

The role of policy-makers in the need debate

The discussions surrounding the need question and the related opposition to individual projects can be linked to the politics on energy policy. As mentioned, opposition can be particularly strong if people fear that a line is not needed for the integration of renewable energy. Lack of clarity, about future energy policies and how energy systems will evolve, often adds to stakeholders' uncertainty. Most environmental NGOs support the EU 20-20-20 targets, while public action groups also often back grid expansions for renewable energies. However, the perception is that the targets have not been translated into clear political objectives, whereas targets for 2030 and beyond are still missing all together. Clear roadmaps would help to overcome concerns regarding the need for new grids and the increased contribution of energy from renewable sources.

Clear definition of roles and responsibilities

Defining the roles and responsibilities of the various involved stakeholders is a formidable challenge, which is closely interlinked with the discussions on energy policy.

TSOs are placed in a position where they have to explain energy policy even though they are not the ones making it. Protests against power lines can be related to the sources of energy that the line is designed to transmit, e.g. from the anti-nuclear movement in France or groups opposing wind farms in Wales. The backing of politicians in explaining their decisions on energy policy is thus often a prerequisite to achieving grid acceptance.

Examples addressing this challenge:
- National Grid is explaining energy policy during every project (UK Box 1 & 2, p.84-85)
- TenneT is sharing its responsibilities with politicians in Schleswig-Holstein, (Germany Box 9 & 18, p. 46 & 50)

Early engagement

Early engagement with local political stakeholders

Cooperation with political stakeholders is highly important for TSOs but brings its own challenges. On the one hand, TSOs emphasise that the backing of local politicians is essential in legitimising their actions. TSOs note, if local politicians confirm the need for grid expansion in general or for a specific project, the chances that the local community will accept the line normally increase. On the other hand, it can be observed with some projects that local politicians align themselves with public action groups or officially issue doubts about some aspects of a project if the opposition becomes stronger. This puts additional pressure on TSOs. In a public discussion, this problem often intensifies ahead of elections as arguments become more controversial. TSOs therefore strive for early official agreements with political stakeholders and authorities to boost their support throughout the planning and permitting process.

Examples addressing this challenge:
- TenneT is cooperating early with local stakeholders in Schleswig-Holstein (Germany Box 9-11, p.46-47)
- Elia established a guidance group with representatives from the administration (Belgium Box 1, p.24)

Early engagement with authorities

One obstacle impeding the acceleration of grid permitting procedures can be a lack of resources burdening the permitting authorities. In some countries they simply do not have enough manpower, thus limiting their ability to provide early and constant cooperation throughout the process.

Examples addressing this challenge:
- National Grid is negotiating Planning Performance Agreements with local authorities (UK Box 4, p.86)
- TenneT is continuously cooperating with the permitting authority (Netherlands Box 6, p.68)
- Terna is continuously consulting regional and local authorities throughout the planning of a new line (Italy Box 3, p.57)

Early engagement with the public

TSOs need to strike the right balance in terms of identifying the best point in time to inform the public about a concrete expansion project. In cases, where the public is unable to clearly see the potential impact of a project, TSO experience shows that stakeholders' interest can be low in the initial stages of strategic planning and subsequent identification of potential corridors. At the same time, until specific corridors are discussed or actually chosen, it can be challenging to get the public interested and involved. Informing the public about a project, when it is not even clear who will be affected requires substantial education on the procedures and active management of stakeholders' expectations. Unmanaged expectations can cause alarm or unrest among the public.

However, informing and involving the public when there are a limited number of options on the future corridor is not the solution. That is

unless TSOs are prepared to re-visit and potentially revise previous assessments to account for material points, which may not have been considered at an earlier stage. In this case, people feel important decisions have been taken without their involvement and often strongly question such decisions.

Legal permitting procedures can increase the challenge. For example, if official procedures foresee a very early public consultation, when nothing is decided, and a second one only after the exact route is chosen, this can be extremely difficult to understand for the affected public.

Generally, TSOs are now opting to seek active stakeholder engagement at earlier stages to overcome late and intense opposition.

Examples addressing this challenge:
- Different TSOs find it useful to involve local multiplier (e.g. mayors) first (Elia: Belgium Box 2, p.24; Statnett: Norway Box 1, p.75)
- RTE is testing new approaches of citizen involvement, e.g. citizen conferences (France Box 7, p.34)
- German TSOs have run a broad information and dialogue campaign in the course of preparing the national grid development plan (p. 42)

Transparent process and decision

Even though transparency on data and processes is highly important to external stakeholders in evaluating decisions, full transparency of documents can be dependent on national laws and in some countries on the will of the permitting authority.

Transparency on legal processes

Many TSOs experience that stakeholders do not have sufficient knowledge about the legal spatial planning and permitting procedure or their options to participate. This can lead to situations where stakeholders have false expectations regarding their level of influence, and at which stages of the process they can actually exert it. TSOs face this challenge in discussions not only with citizens, but also with politicians or NGOs.

Examples addressing this challenge:
- 50Hertz is explaining the procedure in general publications and events without the relation to a specific project (Germany Box 5, p.44)
- National Grid is continuously providing information material on the process steps (UK Box 10, p.88)

Transparency on decision-making mechanisms and criteria

The public often does not understand how TSOs and/or authorities conduct the spatial planning or arrive at decisions on specific routes. Often, they fail to comprehend the decision-making mechanisms and criteria applied by TSOs or authorities, or they do not know where their input can have an impact on these decisions. Given that people start participating in the process at different stages in time, it is necessary to explain procedures and decisions several times.

Examples addressing this challenge:
- National Grid has published a brochure explaining decision-making approach to the public and includes an illustration on different process steps in every project newspaper (UK Box 10, p.88)

- TenneT is organising market place events together with the spatial planning authority (Netherlands Box 3, p.67)
- ERPA criteria from Terna make spatial planning decisions reproducible (Italy Box 5, p.58)

Parallel to explaining the decision making process, it is often necessary to demonstrate and rationalise the technology options. In particular with a controversial topic such as undergrounding, discussions can result if there is no transparency or accountability of the criteria that lead to a decision. For instance, the public can feel they are being treated unfairly in situations where one power line has been built underground while another nearby line was constructed overhead.

Examples addressing this challenge:
- Criteria and their weighting is determined by a National SEA Group in Italy (Italy Box 1, p.55)
- National Grid conducted a consultation on their approach for undergrounding (UK Box 12, p.90)
- Elia discussed criteria on undergrounding in guidance group (Belgium Box 1, p.24)

Transparency on usage of public input

Disappointment arises when the public is consulted but it remains unclear how the feedback has shaped the decisions, if at all. It is, therefore, important to be transparent on the input received in the consultation and illustrating clearly how it was considered during the process.

Examples addressing this challenge:
- National Grid is using a feedback tracking system after public consultations (UK Box 7, p.87)
- National Grid is publishing a detailed Consultation Report after consultations (p. 89)
- German TSOs have published a consultation report, received comments on a website; have organised public event after grid development plan consultation (Germany Box 1, p.42)
- TenneT is sending personalised letters to consultees (Netherlands Box 5, p.68)
- 50Hertz has developed a visualisation of planning adaptations resulting from the participation process in the Uckermark line project (Germany Box 15, p.48)

Informing the public

Providing credible and understandable information

To overcome concerns and doubts regarding grid expansion projects, it is beneficial to inform the public. But this engagement brings its own challenges. To apply for a project, TSOs have to compile substantial amounts of information and commission studies. However, the scope, methodology and/or independence of these reports may be questioned, while the level of detail can be too complex for a non-expert to understand. Conversely, informative material written for the non-expert can be viewed with considerable scepticism and labelled as “commercial material”, or “glossy brochures without content”. The fear is that such material fails to take concerns seriously.

Images can be easily misunderstood, and the material may produce the opposite effects to those intended. Compounding the issue, the likelihood that material is misinterpreted is highest when emotional topics such as electromagnetic fields (EMF) are involved.

Examples addressing this challenge:
- Statnett has an internal feedback system for every project communication strategy (Norway Box 10, p.80)
- National Grid uses a multi-layered approach for design of information material (UK box 10, p.88)
- RTE and National Grid provide references to external sources of information on EMF (RTE: France Box 9, p.35; National Grid: UK Box 11, p.89)
- TSOs cooperate with NGOs for environmental studies (Elia: Belgium Box 7, p.27; Terna: Italy Box 8, p.60)
- DUH provides information material and moderates events (Germany Box 6, p.44)
- RTE uses new media channels (France Box 8, p.34)
- 50Hertz provides personal contact details, along with photo, of project managers on the website (Germany Box 14, p.48)
- 50Hertz distributes explanatory folders on key aspects of grid development (technical options, health aspects, environmental aspects, overhead/ underground…) (Germany Box 5, p.44)
- 50Hertz conducted a road show involving university experts to inform and meet concerns on EMF (Germany Box 16, p. 49)
- 50Hertz publishes intuitively understandable online display of the load flow data via internet (Germany Box 4, p.43)

Dealing with the media

With some grid expansion projects, media plays a decisive role in shaping public opinion. Since the media tend to focus on conflicts rather than on amicable decision-making, the impression given by media is often slanted towards conflict and controversy. This also means that media attention is often most intense at a late stage of the project when decisions on the power line have already been taken. Some TSOs thus actively involve the media during the need discussions at general grid planning or specific project planning. They also prepare their employees to cope with high media attention.

Examples addressing this challenge:
- Statnett provides media trainings and communication manual for staff (Norway Box 8 and 9, p.79-80)
- German TSOs organised a media workshops in the course of the preparation of the grid development plan (Germany Box 1, p. 42)

Creating appropriate forums for discussion and collaboration

When entering into discussions with external stakeholders on the future line, misunderstandings regarding the details up for discussion can arise. It can be very challenging to provide external stakeholders guidance on the relevant points for their input and the associated timing. Moreover, difficulties during discussions sometimes occur when stakeholders want to debate decisions, which have already been taken.

Different discussion formats can likewise have a significant impact on

their outcome. While some formats trigger a real exchange of ideas, others can even strengthen the opposition. It is thus difficult for TSOs to find the right formats for different target groups and develop an atmosphere of cooperation rather than opposition. Sometimes, a neutral moderator is required to meet this challenge.

Examples addressing this challenge:
- National Grid has neutral facilitators in Thematic Groups and Community Forums (National Grid: UK Box 8 and 9, p.88)
- German TSOs used different workshop types in the various stages of the development of the grid development plan, partly involving neutral moderation (Germany Box 1, p. 42)

Benefit sharing

One specific challenge differentiating grid expansion from other infrastructure projects is the lack of benefits for the regions impacted by their construction. For grid projects, the affected regions often merely provide energy transmission and are seldom the producers or consumers of the energy itself. Taxes are sometimes levied for substations and towers, but they are often modest. Comparatively, newly constructed motor highways, train tracks, or airports yield clear and traceable advantages. The affected region can profit directly from better transport connections, boosts to the local economy, or increased tax revenues. Benefit sharing models for grids have not been tested extensively yet.

Examples addressing this challenge:
- One pilot project is planned in Schleswig-Holstein, Germany on how to share benefits, giving citizens the option to invest in grid projects ("Bürgernetze": Germany Box 12, p.47)

2.2. Nature Conservation and Environment

In public discussions, environmental concerns and concerns of affected citizens are often played off against each other. On the one hand, some people fear that nature legislation is stricter than protective regulations for humans. Some TSOs report the feeling that "birds are protected better than humans" is raised in discussions. On the other side, environmental concerns are sometimes misused for achieving other personal interests. Balancing out and finding a solution which addresses both concerns is one of the biggest challenges faced by TSOs and governing authorities. Moreover, it is again a joint task of the involved stakeholders, e.g. politicians, TSOs, local authorities or NGOs to explain the reasons behind environmental legislation and its value.

In contrast to the points mentioned in the first chapter, challenges in respect of the environment differ considerably in the considered countries.

Strategic Environmental Assessment (SEA) and the Environmental Impact Assessment (EIA)

High quality environmental assessments are highly dependent on the ability and capacity of

environmental authorities. It is difficult to achieve a good result if authorities are overburdened.

One procedural challenge in conducting EIAs is that many TSOs have started to front-load major planning steps at the pre-application phase. This means that stakeholder consultations and essential decisions are taken prior to environmental assessments. This problem is mitigated if legislation prescribes an SEA at the project level. Other solutions include the development of an environmental report at early planning stages or shifting the EIA to the pre-application phase.

Availability of environmental data

In some countries, there is no data base or an absence of high-quality environmental data, essential to project assessments. Particularly in federal states, some presiding authorities have cartographic data but lack a national pool, which can be easily accessed. Moreover, the content of databases can become quickly out-dated since some environmental data can change significantly over a short period of time. Compiling the necessary information and determining which study areas require more detailed elaboration is, therefore, often the first challenge.

Examples addressing this challenge:
- Terna is conducting field trips and continuously updating their database (Italy Box 3, p.57)
- In Belgium, the state provides a high quality cartographic database (Belgium Box 6, p.27)

Continuous cooperation with environmental NGOs

A recurring problem of TSO-NGO cooperation is a lack of resources, especially on the NGO-side. Particularly during grid expansion projects, many NGOs are short of the capacity to follow each step of the procedure and give substantial input on the environmental planning. Their capacity often only allows them to react to real and immediate threats, which can be at late stages of the grid planning. It is a common challenge of NGOs and TSOs to overcome this unfavourable situation by finding innovative measures of cooperation.

Examples addressing this challenge:
- RTE and French DSO finance a full-time position at LPO (French BirdLife) to work on joint projects (France Box 12, p.36)
- Terna has long-term contracts for the realisation of joint projects with NGOs (Italy Box 8, p.60)
- Germanwatch established a new position dealing with grids (Germany Box 2, p.43)

In many cases, cooperation between TSOs and NGOs is sporadic with only occasional collaboration on selective points. Complex structures both within NGOs and TSOs make constant dialogue more difficult. In many instances, different interactions are not known by all the employees. For instance, project managers on the ground might be unaware of developments discussed on a national level.

Examples addressing this challenge:
- National Grid collects regular internal feedback, develops best practices (p. 92)

- 50Hertz uses external information material for internal communication (Germany Box 23, p.52)
- Statnett developed communication manual for employees with technical background (Norway Box 8, p.79)
- Elia provided communications training for representatives with technical background (Belgium Box 4, p.25)

One additional point, which can impede the cooperation between TSOs and NGOs, is the impression shared by many NGOs that the impact on nature and the environment is given insufficient weight in route planning compared to keeping financial costs down.

Example addressing this challenge:
- The European Grid Declaration and its implementation

2.3. Change process and internal structures

The challenges concerning external stakeholder involvement have an immediate impact on the company culture of TSOs. Traditionally, TSOs have pursued a technology-driven planning approach focused on achieving the optimal set of legal objectives in building stable, secure and cost-efficient grids. Employees involved in planning processes thus tend to have predominantly technical backgrounds with insufficient expertise in public engagement or environmental planning and communication. Among the interviewed TSOs, a change in this approach has begun driven by an increase in the hiring of experts in those two fields. However, the process of adopting this change throughout all company divisions can be complicated and take a lot of time. As a result, employees who strive towards earlier and more extensive stakeholder involvement sometimes still face scepticism within their organisations.

Examples addressing his challenge:
- RTE has established new structures which reflect engagement with external stakeholders, (RTE: France Box 13, p.37)
- Many TSOs have established positions of project communication or stakeholder involvement (50Hertz: Germany Box 22, p.52; Statnett, p.80)

In addition, existing company structures may have to be adjusted to allow for seamless cooperation between different fields of expertise. For example, communication departments and the grid development unit are traditionally situated in different divisions with little direct interaction.

In the following chapters, more details on how these challenges are met in different countries, will be provided.

3 Belgium

Transmission System Operator: Elia
Energy mix: 53,5% Nuclear, 38.8% Combustible Fuels, 5,7% Geoth./Solar/Wind/Other, 2.0% Hydro[8]

Project name: Stevin
Location: from Zeebrugge (coast) to Zomergem (near Gent)
Timeframe: 2008 - ~2014

Interview partners

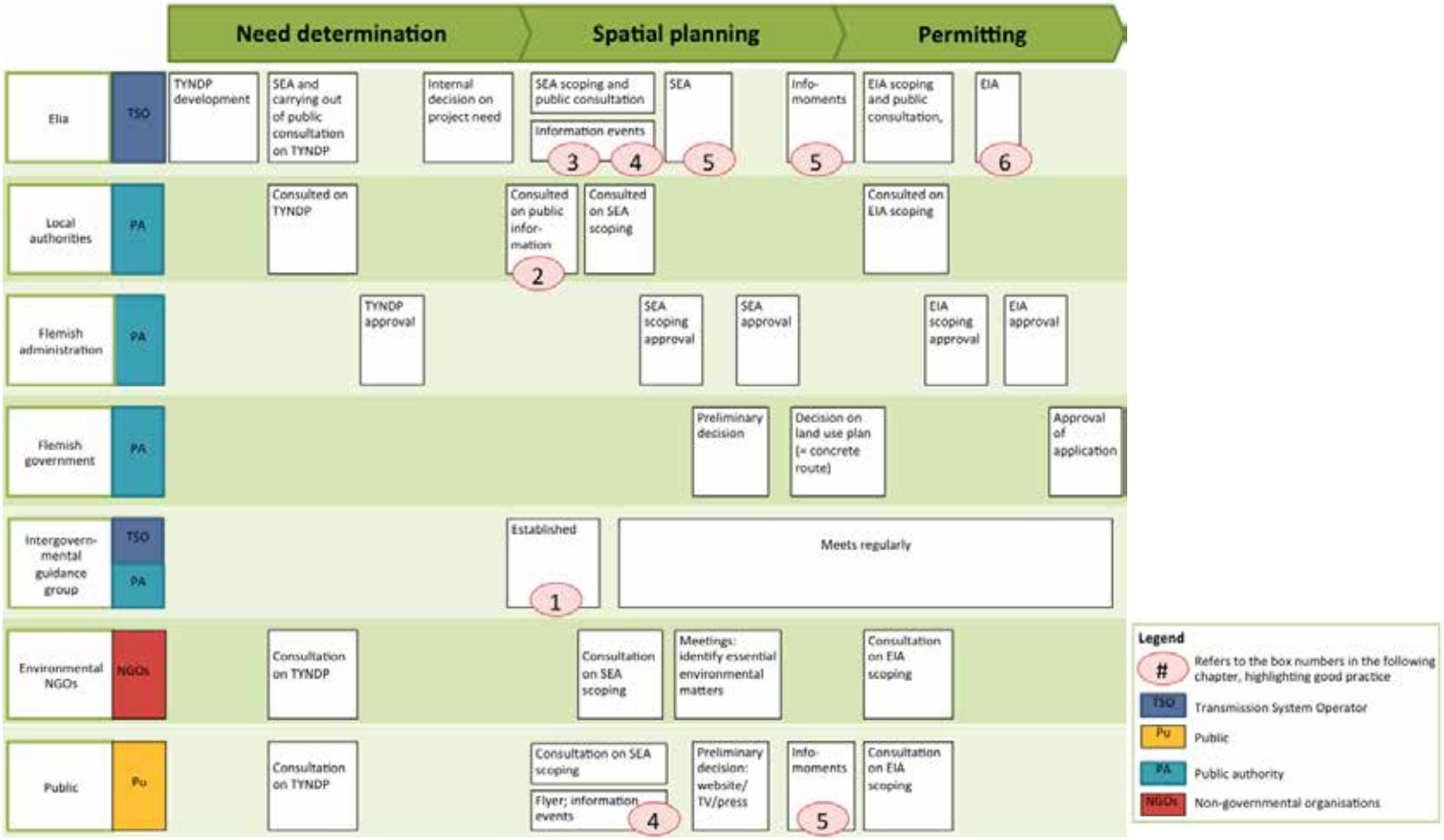
- Jeroen Mentens, Elia, Permitting and Environment, Negotiator
- Jeroen Maes, Elia, Project Leader Stevin project
- Hugo Decoster, Elia, Permitting and Environment, Negotiator

- Annemie De Graef, Citizen Action Group Maldegem
- Geert Steenkiste, Citizen Action Group Maldegem

The subsequent chart illustrates the most important steps in the planning and permitting procedure of Belgium. More details on these process steps are explained in the text below. The highlighted numbers refer to boxes in the text which show good practices.

[8] International Energy Agency (2012) *Monthly Electricity Statistics July 2012*. Available at http://www.iea.org/stats/surveys/mes.pdf

3.1. Planning and Permitting Procedure: Overview



3.2. Terminology

Dienst milieueffectrapportagebeheer (Dienst MER) - Service on environmental impact assessments
This is part of the Environment, Nature and Energy Department (LNE), which serves as the environmental administration of the Flemish government. It is responsible for the approval of both the scoping and the final documents of SEAs and EIAs.

Flemish government
As a federal system, Belgium has regional and community governments besides a federal government. The region Flanders has both a government and a parliament and has a significant amount of political autonomy, e.g. for spatial planning and building or environmental permits.

Gewestelijk Ruimtelijk Uitvoeringsplan (GRUP) - Regional land-use plan
Approved by the Flemish government on the basis of the Department of Spatial Planning (part of the Flemish Administration). Includes the Environmental Impact Assessment and a decision on one route option.

Guidance Group
For the Stevin project, Elia voluntarily decided to establish an interdepartmental guidance group with representatives from the Flemish administration, including the Department of Spatial Planning, the SEA service, the Health Department, the Department for Nature Conservation, and the Department for Landscape.

3.3. Planning and Approval Process and Interaction with Stakeholders

3.3.1. Need determination

The grid expansion needs at Elia are determined by the grid development plan. The plan is developed at the federal level. It is updated every five years and covers a period of ten years.

Since 2006, the development plan has needed to be supported by a Strategic Environmental Assessment (SEA - see chapter 3.4.1). The SEA contains a prescribed public consultation period, from which comments are taken into account when finalising the plan. The Minister for Energy has to approve the final plan.

The grid planning department of Elia decides internally if a specific grid expansion project is needed. It evaluates different options and comes up with a proposal on a given line between two substations or to a new substation. In the case of the Stevin project, which is the first large new overhead line that is being built after a two-decade break, the need is very obviously driven by the connection of offshore wind parks close to the coast. Further need drivers are the necessity to build a subsea connection between the UK and Belgium for which the conversion station will be built in the local harbour area. The project will also enable the connection of decentralised (renewable) production units in the area and further secure the supply in Flanders and other regions of Belgium. The need for the new line is not a matter of public debate.

3.3.2. Spatial planning

For the Stevin project, The internal, technology-driven planning process resulted in several possible options. Elia commissioned an external consultancy bureau to conduct a SEA on these options. The SEA included the development of a scoping document, which was up for discussion in a public consultation. The legislator only prescribed Elia to publish the consultation on a website and put up public posters at a town hall. The Flemish administration decided which route options required further elaboration, taking into consideration the input from the consultation. The consultancy bureau then drafted a report in which a prioritisation of the route options was carried out. The SEA report was approved by the Flemish administration.

Box 1: Interdepartmental guidance group

During the development of the scoping document for the SEA, Elia, together with the Flemish administration, established an interdepartmental guidance group. Throughout the whole planning and permitting process, the group met regularly, both as a group and on a one-on-one basis. Important process steps such as the scoping document, the public consultation, or the surveys during the SEA process as well as their relevant implication on Elia's actions were discussed. With this, Elia ensured to incorporate the views of the Flemish administration on route alternatives in the analysis before presenting the document to the public. Elia found these exchanges very useful since it helped provide guidance for controversial issues such as EMF.

Box 2: Early consultation of politicians and authorities

For the Stevin project, Elia decided to meet the mayors of the concerned municipalities ahead of the mandatory public consultations. The agenda was to discuss relevant formats for public information and dialogue, which would accompany the official public consultation. For this, Elia got in touch with the concerned municipalities, explained the ideas and decided jointly on how the communication with the public should be conveyed. Agreements on the number and format of the public involvement moments were made.

Box 3: Early information events for the public

For the consultation of the SEA scoping document, it was decided to hold information meetings. Citizens were invited by direct mailings. Meetings were divided into two parts: In the first part, people could have a direct one-on-one dialogue with employees to talk about specific issues. The second part was a plenary session where the plans were presented and open questions could be asked. In retrospect, Elia evaluated the first part as more successful. While one-on-one talks served fact-based discussions, in the plenary sessions, opposition was fostered and conflicts reinforced.

The need and the suggested routing were explained to the public through an exposition, maps, a movie, and a brochure. An external, independent expert on EMF was present to answer questions on this subject.

The communication campaign was planned and implemented with the help of an external communication agency. Brochures were developed jointly. The agency provided regular media

monitoring and assisted in planning the information sessions.

Box 4: Communication training of Elia employees
Elia representatives that attended the sessions were employees who would be directly involved in the planning and permitting of the power-line. To prepare them for the direct interaction with the public, they were trained by the agency on how to talk to laymen or face emotional opposition. Due to the technical nature of the planning and the technical background of employees, answers were prepared in a non-technical language to address typically asked questions.

During the information meetings, a focus was placed on clarifying single process steps and the options and instances for citizens to contribute to the decision-making. However, many people didn't fully grasp that if they wanted their concerns to be heard, they had to get active at a very early stage. This is due to the fact that additional route alternatives could only be proposed in the public consultation of the SEA scoping document.

Initially, Elia had considered undergrounding for the proposed route as being technically infeasible. During the consultation, however, it became clear that it would not be possible to avoid a study of potential undergrounding. The guidance group at this stage developed a set of criteria to identify sites for possible undergrounding. This was done to ensure that all future decisions on undergrounding were based on a transparent, institutionalised set of criteria. Elia then applied the criteria to determine for which parts of the line an undergrounding alternative would be studied in the SEA. After the discussion within the guidance group, the criteria were incorporated into the SEA, thus making a clear recommendation for which parts an underground solution could reduce the environmental effects.

The finalised SEA application document proposed a couple of very detailed developed routes as the best possible options, including the suggestion whether parts should be built underground or not. Following legal requirements, the document was published on the website of the Flemish administration and Elia's own website. No special efforts were made to announce the availability of the published document.

The preliminary decision by the Flemish Government about the Spatial Plan together with the SEA document were officially published on the website of the Department of Spatial Planning. This served the purpose of making the underlying reasons for the routing decision transparent. The publication was announced via radio and press. After a public inquiry about the preliminary Spatial Plan, the statements and objections from the inquiry were evaluated and the Flemish government approved the plan.

Box 5: Info-moments to explain governmental routing decision
Following the approval of the spatial plan by the Flemish government, Elia again decided to go beyond legal requirements on participation and implemented a second round of public meetings. The "info-moments" were organised together with the spatial planning authority. They aimed at explaining the governmental routing decision, while providing opportunities for the public to formally react on the

decision and the further procedures of building the line. Elia decided this time to abstain from the plenary sessions and focus only on the exhibition and one-on-one dialogue. The plenary session in the first information round had triggered the formation of opposition so that the exhibition and direct dialogue format was evaluated as being more productive in providing fact-based knowledge. The open drop-in session format, several hours in length, also made it easier for the interested public to find a suitable point in time for their participation – something that is not the case with a plenary session.
Information about the events was given via the local press, local municipality magazines, and webpages. Furthermore, brochures were distributed to all households close to the future new line. The information material prepared for these sessions was adapted to the regional peculiarities, i.e. information was prepared for each region and was thus more target group specific.
Elia furthermore established a contact-mail address and free phone line that would be answered by one of the external consultants to respond directly to the most frequently asked questions, while more technical questions were diverted to the respective departments.

3.3.3. Permitting

The routing decision taken on the basis of the SEA is already a very precise one, meaning that the route is determined in explicitly measured meters. The permitting process therefore serves to answer questions such as where pylons are going to be built, potential mitigation measures to be taken, and road construction required to erect the pylons, etc.
At this stage, Elia has to conduct an EIA, apply for the declaration of public utility and the building permits. For all three steps, a public consultation is foreseen by the legislator. The official permitting phase had not yet been started for the Stevin project at the time of the interview.

3.4. Nature Conservation and Environment

3.4.1. Strategic Environmental Assessment and Environmental Impact Assessment

The project-specific SEA for the Stevin project was conducted by an external consultancy bureau. Route alternatives and the methodology, which Elia and the consultancy intended to use in assessing the different options, need to be presented in a scoping document, which is subject to a public consultation. Afterwards, the SEA/EIA service department of the Flemish administration publishes guidelines for the SEA, including comments from the public consultation, and prescribes which route alternatives have to be examined.

The service department also approaches other specialised administration departments (e.g. archaeology) for input where appropriate. So-called guideline meetings are held among administrative bodies at the Flemish, province, and community levels to discuss the input from the consultation. The SEA/EIA service department puts up all topics for discussion, where it deems further examination is required. The SEA consultants can provide their input (e.g. on questions whether a methodology proposed makes sense or not), but it is the service department that decides how precisely the different topics will be dealt with in the guidelines.

Once the special guidelines have been signed off, the consultants start writing

the specific assessments. An informal second meeting with the same group takes place to ascertain whether guidelines have been followed, or if any new matters have to be included. This is very rarely the case.

The final SEA then has to be approved by the service department, which likewise checks if the guidelines have been followed.

Box 6: Availability and quality of cartographic data
Raising data to run SEAs and EIAs is generally comparatively easy, thanks to the availability of maps on various layers of information, such as aerial photographs, parcels, and special landmarks or monuments in the Flanders region of Belgium. In addition to this, the government-funded Institute for Nature and Forest Research regularly goes to see each parcel to value the habitat found there.

Elia interacted punctually with the BBL[9] and Greenpeace during this process for the Stevin project. They helped to identify certain essential environmental protection matters (in the specific case that undergrounding in a coastal dune region would be impossible from a nature protection perspective). However, given that most of the nature reserves affected by the line are owned by the government, the NGOs usually accepted that the responsible governmental institutions ensure that environmental legislation is being sufficiently respected.

The high quality of the environmental assessments is likewise ensured, given that SEA and EIA procedures can only be conducted by certified experts. Certification is needed for each potential assessment topic separately, e.g. impact on humans, soil, nature, noise, water, air, social aspects, and landscape. Three to four years of work experience plus a defined amount of training hours in very specific topics are a prerequisite for certification. The Flemish Environment, Nature and Energy Department grants the certification.

In addition to the project specific SEAs and EIAs, Elia has to run an SEA on its ten year development plan. For this, Elia is commissioning an external consultancy bureau as well. The SEA scoping document is up for public consultation. Approval is given by the administration.

3.4.2. Collaboration with environmental NGOs

Box 7: Study from environmental NGOs
Elia has commissioned a study "Reducing bird mortality with high and very high voltage power lines in Belgium" from Aves-Natagora/ Belgian BirdLife, an NGO focused on the protection of birds and nature. The study assesses the most important bird areas and flight patterns in Belgium in relation to the current overhead lines owned by Elia. The goal of the study is to look for priorities in the adjustment of OHL (attachment of bird spirals). Although the study is still ongoing, the preliminary results have already been used to include bird spirals in a project where a pylon at the edge of a specially protected area needed to be enlarged.

[9] Bond Beter Leefmilieu (Federation for a Better Environment)

3.4.3. General projects to protect the environment

Box 8: Life+ project on restoring corridors under overhead lines
Elia, in collaboration with the French TSO RTE, several environmental NGO's (Solon, Carah), and the Walloon government, has launched an EU-funded Life+ project to restore and/or create habitats in Natura2000 sites under existing overhead lines. The overall objective of the project is to restore 130km of corridors under overhead lines in Belgium and France. It aims at fostering innovation in the management of forest corridors and demonstrating the innovative character. Furthermore, the project wants to prove that active management for biodiversity can reduce the costs of securing and maintaining corridors. RTE and Elia will share the experience with other TSOs. Part of the project is also to develop training modules for the maintenance teams and provide guidelines with favourable actions for biodiversity.[10]

For the East-Limburg project (building of a second circuit), a forest management plan will be developed for the first time. The goal of the forest management plan is to increase the biological value of the OHL corridor, to decrease the maintenance cost of the corridor, and to obtain all permits. The OHL of 30km passes through a Special Protection Area and close to several other special protected areas or designated areas of conservation.

3.5. Change Process and Internal Structures

Elia has not had to build new overhead power lines in over 20 years. When confronted with the necessity of a new line, it was recognised that a more open and integrated approach would be necessary compared to what was applied in the past.

At the beginning of the planning process for the Stevin project, it was therefore decided to establish a project group that would develop a communication strategy for the public. A support group consisting of Elia's management, was consulted from time to time. Furthermore, a committee of different departments now has to evaluate the different steps taken and agree on next ones. Experiences from the project are reflected to the management.

The Stevin project has triggered a shift in the mindset of Elia, even though some structures to a participatory approach and the interaction with external stakeholders have not been fully adapted yet.

There is one dedicated expert for nature conservation and green activities in Elia. She is mostly involved in the green management of existing power stations, but she is also responsible for the Life+ project (see box 8) and the cooperation with NGOs, e.g. for the study on the reduction of bird mortality (see box 7).

[10] http://www.life-elia.eu/en/

4 France

Transmission System Operator: RTE
Energy mix: 74,7% Nuclear, 9.4% Combustible Fuels, 12.7% Hydro, 3.1% Geoth./Solar/Wind/Other[11]

Project name: Cotentin-Maine
Location: Normandy - North-West of France
Timeframe: 2006 - 2013

Interview partners

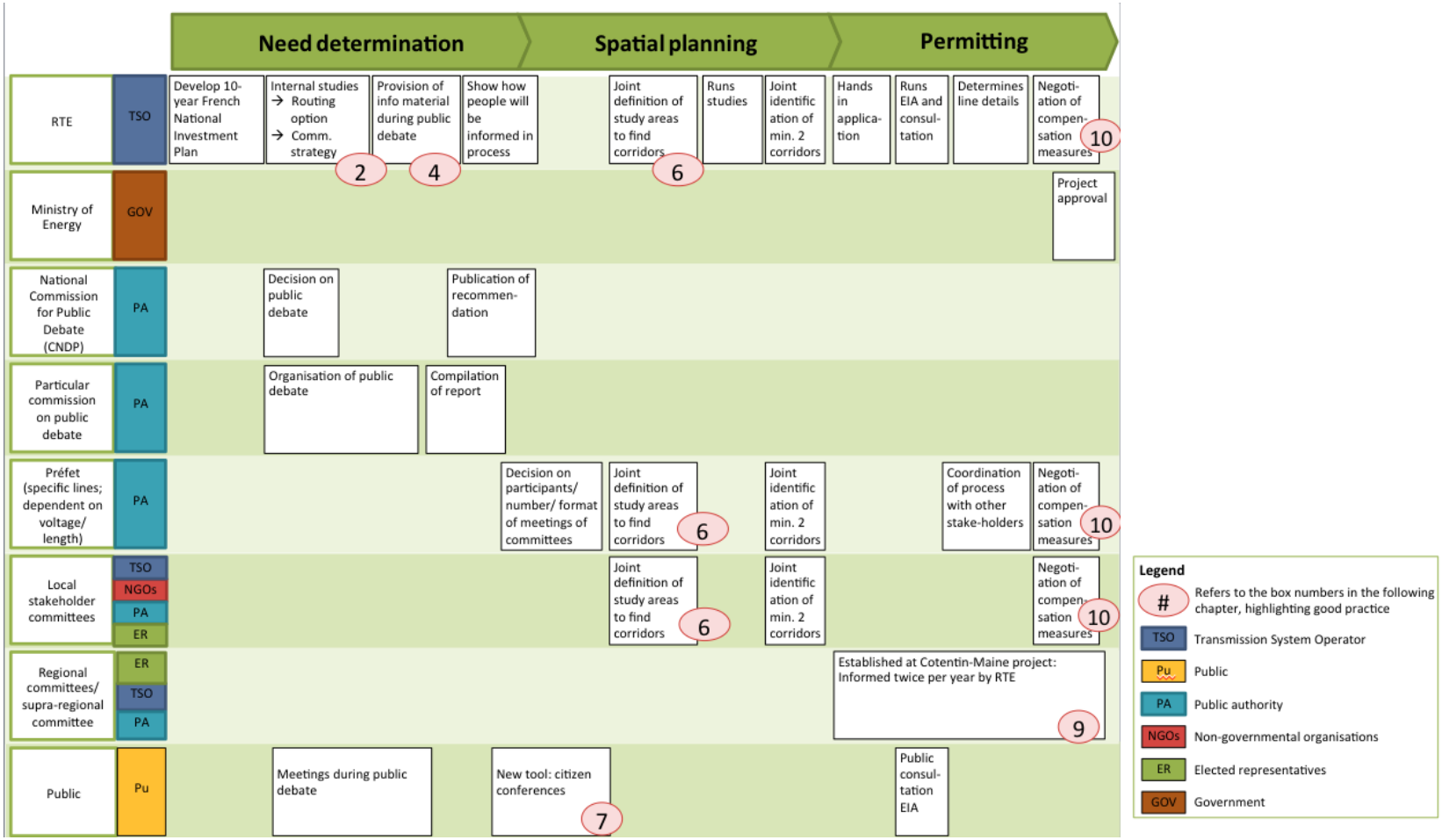
- Gaëtan Desquilbet, RTE, Project Director Avelin – Gavrelle
- Philippe Rémy, RTE, Project Director Cotentin – Maine
- Martine Debiez, RTE, Stakeholders and Environment Department

- Adeline Mathien, FNE (France Nature Environnement), Policy Officer for Energy
- Alain Argenson, FNE
- Benjamin Kabouche, LPO (Ligue pour la Protection des Oiseaux/ BirdLife), Managing Director
- Yvan Tariel, LPO, Responsible for Raptors

The subsequent chart illustrates the most important steps in the planning and permitting procedure of France. More details on these process steps are explained in the text below. The highlighted numbers refer to boxes in the text which show good practices.

[11] International Energy Agency (2012) *Monthly Electricity Statistics July 2012*.

4.1. Planning and Permitting Procedure: Overview



4.2. Terminology

CNDP (Commission Nationale du Débat Public - National Commission for Public Debate)
The independent administrative authority, established in 1995 by the French government. The CNDP is responsible for ensuring public participation in infrastructure projects of national interest and consists of 24 members (NGOs, mayors, politicians).

CRE (Commission de Régulation de l'Énergie)
The independent administrative body in charge of regulating French electricity and gas markets.

Préfet
State's representative in a department or region appointed by the President based on the proposal of the Prime Minister and the Minister of the Interior.

Public debate
The CNDP decides at beginning of some projects (depending on the voltage and the length) whether a public debate is warranted. In such debates, any citizen is informed about the project, can state his/her opinion and ask questions. RTE is not responsible for organising the debate. This is done by a particular commission set up by the CNDP.

Stakeholder dialogue
This is part of the official planning procedure of every development project in France regardless of its length or voltage. The Préfet decides on different committees that meet regularly to discuss and decide on study areas and route corridors. The Préfet chooses participants and determines the number of meetings. Normally, established organisations representing different interests (e.g. industry associations, farmers associations or environmental NGOs), local authorities and regional and local politicians (e.g. mayors) take part in the committees.

4.3. Planning and Approval Process and Interaction with Stakeholders

4.3.1. Need definition

Each year, RTE is internally developing a ten-year National Investment Plan. The French regulator, CRE, organises a stakeholder dialogue on this plan, makes a cost-efficiency analysis and approves it afterwards. Starting in 2013, RTE is obligated to conduct an SEA on the next revision of the plan.

Box 1: Stakeholder Engagement on the National Investment Plan - The "Grid Perspectives"-Committee
The "Grid Perspectives"-committee consists of representatives of RTE customers (producers, distributors, large industrial consumers, traders, etc.), as well as NGO representatives (France Nature Environment, CLER (Comité de Liaison Energies Renouvelables), Negawatt, etc.) and public institutions (e.g. Ministry of Energy and Environment). It deals with the investment plan and related issues, e.g. grid development criteria, or long-term development strategies. Also other participants' interests, such as the impact of climate change on grid resilience, or the value of lost load are discussed. Meetings take place four to five times a year. In addition, working groups have been set up to deal with specific topics, such as long-term strategies of the grid development. The discussions in the committee give RTE the opportunity to share views and information on the future of electricity transmission among a variety of stakeholders.

Based on the investment plan, RTE defines which concrete projects it considers for application to the Préfet. Before the decision is taken to apply for a project, RTE may at times commission external experts to compile analyses of the concerned region.

Box 2: Regional stakeholder mapping
The analyses of the region give detailed information, e.g. about former infrastructure projects, the social and industrial landscape, or whether important stakeholders have interests concerning a potential line. Sources for these analyses include newspapers or official documents but also interviews with regional employees of RTE, and sometimes, the administration and the local population. On this basis, RTE specifies the project suitable for application.

Together with the technical studies undertaken internally, the stakeholder mapping and environmental analysis form the basis for the decision whether a project has to be proposed to the Ministry of Energy or the Préfet. For specific important projects[12] RTE has to inform the National Commission on Public Debate (CNDP). The CNDP decides whether a public debate before the official permitting process will take place. If a public debate is warranted, the CNDP appoints a commission, which is responsible for the organisation. This includes the content of the events and the information material published by RTE. The commission requires lead time of circa six months to organise two months of meetings with the public. The cost is about two million euros, borne by RTE. The particular commission normally organises five to seven meetings on different topics, such as EMF, landscape, and aesthetics, etc. The events are announced in local newspapers and radio channels. RTE is invited to these events as one participant of the podium. The events are chaired by representatives of the commission and are usually in the format of an open discussion with citizens asking questions and podium members answering. As RTE describes, the "confrontational" set-up of these discussions (with the audience positioned on one side with the experts on the other) can, however, strengthen opposition rather than prevent it.

RTE has to publish information material to accompany the public debate. In an approximately 100-page booklet, different aspects of the project are explained, e.g. the steps of the procedure, the need for the line, different options to realise it, the possible impact on the economy, human beings and nature. The events are recorded and can be downloaded from the website of the CNDP.

Box 3: Explaining the need for new grids to the public
In order to explain the broader picture and the need for new grids, RTE is considering developing a video game, in which one can "play" dispatcher, take control over load flows, and have a budget, etc. The idea of the game is to show in an easy and understandable format why the strengthening or expansion of grids is needed, even though energy is produced regionally.

Box 4: Financing of information material for external stakeholders
During the public debate, RTE has to pay for publications of opinions of different stakeholder groups. In a four-pager, everyone opposing or supporting the project can explain why they think the

[12] 400 kV OHL or underground more than 10 km or 225 kV OHL more than 15 km

line should be built, how it should be built or why it should not be built. RTE is often facing the problem that only opposing parties want to publish their opinion while supporters stay silent.

At the end of the public debate, RTE has to present to the CNDP how it intends to involve the public in the subsequent process. This includes concrete measures, such as the establishment of a project website or a project newsletter. Furthermore, the commission in charge compiles a report in which it states whether the debate was done properly. The report includes a list of questions collected during the events that RTE has to answer in written form.

A core weakness of the public debate is the lack of transparent criteria for the decision of the CNDP regardless of whether a public debate is carried out or not - this is decided on a case-by-case basis. Moreover, concerns that are expressed during the public debate are summarised. But these do not necessarily have to be taken into account for the subsequent process. This leaves people with disappointment if their objections are not considered in the further planning.

NGOs confirm that RTE's approach towards stronger stakeholder involvement has improved during the last couple of years, e.g. via the "Grid Perspectives"-committee. However, NGOs also see a need for more information about the overall electricity system, the rationale behind the need for grids in general and a specific line in particular.

Box 5: RTE's engagement to soften peaks in energy consumption

During recent years, RTE has redefined its role as a TSO. It has recognised that in order to achieve acceptance of single power lines, it has to consider the energy system and its impacts on society. RTE is for example engaging in activities to cushion peaks in electricity demand by actively involving consumers. In the regions of Brittany and Provence - Côte d'azur, where energy is in short supply, RTE has established a website together with local authorities. [13] Consumers can actively engage in the initiative, e.g. by subscribing to a short message service that informs them when energy consumption is high. Consumers can thus decide to postpone their own consumption and contribute to the system stability.

4.3.2. Spatial planning

During the spatial planning and permitting phase, the Préfet plays a major role for the involvement of different stakeholder groups. The Préfet sets up the regional and thematic committees, which build the core of the stakeholder dialogue.

Box 6: Stakeholder dialogue to determine route corridors

The Préfet decides on the participation of stakeholders in different committees, the number and themes of the committees and the number and format of the meetings. Participants normally include mayors, local associations and authorities. Usually, the non-organised public is not involved in the stakeholder dialogue unless the Préfet decides to organise public meetings.

Every step of the spatial planning is discussed in the committees. Together with the Préfet, they decide on the criteria, which RTE should consider when undertaking more detailed

[13] http://www.ecowatt-bretagne.fr/ and http://www.ecowatt-provence-azur.fr

environmental, technical and social studies to determine route corridors. The committees finally vote for the corridor of "minimum environmental impact" that needs to be further detailed and examined. RTE uses the committees to actively engage external stakeholders, get their perspectives on different matters, and inform them about the current planning phase. This normally proves to be very successful, since good working relations are established. It nevertheless does not prevent opposition to the project.

For important projects, RTE informs mayors about the project with brochures that are published continuously. While at a first stage, only mayors receive these brochures directly per mail, the affected population receives them after the spatial planning. In the brochure, the affected region is described, responsible people, such as the introduced Préfet, and the approach to determine the study corridor are explained.

Box 7: New approach to involve the public in spatial planning

In one project, RTE has tested a new approach for early involvement of the population. The CNPD had decided against a public debate. However, RTE judged it was necessary to involve the public early in the process. RTE therefore entrusted a consultancy to conduct a public survey on the sensitivities of this region. Some 120 interviews based on open questions were conducted with citizens living in the area. The questionnaires included topics like the relationship to nature or the general way of life. On this basis, 12 people were identified as being representative for the whole region. They were invited to a citizen conference, which lasted a total of six days spread over a period of seven months. In these conferences, participants were invited to draw in a map as much information about the region as they wanted to. In the end, the 12 people agreed on one synthesis, pointing out where a future line should not be built and giving ideas for mitigation and compensation projects. This final map was taken into account by RTE when developing corridor options. Representatives of RTE state that the results were useful for the spatial planning since regional sensitivities could be taken into account at an early stage, and that it enabled the silent majority rather than opponents to take part in the process.

Box 8: New information channels: social media

RTE has started to use new information channels both for project and corporate communication. For the project Cotentin-Maine, RTE has launched a twitter channel to inform about project news.[14] With the channel, information provided on the website can reach a broader audience. Particularly young people, who are not reached by other communication means, can be addressed with this new format. Moreover, RTE has established a twitter channel for the company as well as a facebook page[15]. In general, reactions to the provision of more channels for information and feedback are positive.

[14] http://twitter.com/cotentin_maine
[15] http://www.facebook.com/rte.france, http://twitter.com/rte_france

4.3.3. Permitting

After the corridor of least impact is identified by the stakeholder committees, the Minister of Energy or the Préfet [16] has to approve it. Afterwards, an Environmental Impact Assessment (EIA) is carried out including a public inquiry. For the inquiry, the documents are displayed publicly and everyone can submit comments on them. The results of the EIA are part of the application documents for the Declaration of Public Interest (DUP). After the DUP is granted, RTE proposes the exact technical design of the line including the precise location of pylons and substations. The Préfet coordinates the process with other stakeholders, such as the mayors of affected municipalities, and finally issues the authorisation for technical compatibility.

Box 9: Regional Committees in the Cotentin-Maine project

To inform local stakeholders about the on-going process, two regional committees were established by the Préfet during the Cotentin-Maine project. Members include NGOs, the chamber of commerce, citizen action groups, local politicians and other relevant stakeholders. The Préfet invites them approximately twice a year and RTE has the chance to report what has been done so far and what the next steps will be. For NGOs, these committees are very useful to get information on each aspect of the project.

Moreover, the Préfet established one supra-regional committee with regional and national politicians serving the same purpose of information sharing.

Box 10: Project accompanying plan (PAP)

In cooperation with the Préfet and local authorities, RTE is negotiating a variety of compensation and mitigation measures. For example, the Préfet decides on a commission (e.g. local politicians, agricultural association, chamber of commerce, commission for tourism, ERDF (DSO)) for every new overhead line (OHL) project. This commission can decide on 10 per cent of the overall project costs for a 400 kV OHL. They are given directly to affected municipalities and can be spent on local projects, e.g. undergrounding existing distribution lines or fixing local buildings.

Box 11: Dealing with concerns regarding EMF

To respond to the concerns of citizens about the potential negative health impacts of EMF, RTE undertakes several educational measures. First of all, a website has been established. Under the name "la clef des champs" (the key to the fields), RTE produces information for different interests. With the help of video clips, illustrations and brochures, RTE tries to answer the most frequently asked questions for non-experts. For people who are interested in more details, the regulatory framework is presented and links to studies and recommendations regarding critical values included. In an interactive map, visitors of the website can click on different sites where measurements have been carried out close to power lines. The highest measure taken on this site is presented together with more data, such as the time of measurement, different distances to the electricity line or the type of pylon.[17]

[16] depending on the length and voltage of the line

[17] http://www.clefdeschamps.info/

In its corporate blog, RTE is commenting regularly on difficult topics, such as EMF. Input includes video clips showing interviews with scientists or discussions between RTE employees and external stakeholders. [18] During the Cotentin-Maine project, RTE is offering to measure magnetic fields and noise exposure inside houses close to the future line before, during and after the construction. Moreover, RTE is offering a special medical service involving doctors in information events.
Two years ago, RTE wrote to each mayor, whose district is affected by any RTE equipment (18,000 letters), offering to measure EMF close to the electric infrastructure. However, reactions of mayors were very poor with only one in a thousand asking for these measurements.

4.4. Nature Conservation and Environment

In 2002, RTE established an Environmental Management System, which assesses, controls and aims at limiting RTE's impact on the environment. It consists of four main themes: resource management, natural habitats, biodiversity, transparency and dialogue with stakeholders. RTE has been ISO 14001 certified since 2004.

4.4.1. Strategic Environmental Assessment

Starting in 2013, RTE will have to carry out an SEA on its national net development plan and on regional development plans for connecting renewables for the first time. For this, RTE plans on commissioning external consultants.

4.4.2. Environmental Impact Assessment

RTE is commissioning an external consultancy to conduct the different EIAs required. Given that RTE has been carrying out EIAs for more than 20 years, they have good knowledge of relevant consultants. To ensure a high quality of their work, RTE has developed internal rules for the acknowledgement of consultants and guidelines that they hand out to consultants before they start their work.

4.4.3. Collaboration with environmental NGOs

In 2004, RTE established the "Comité national avifaune" (national committee on bird protection - CNA) together with LPO, FNE and ERDF (French DSO). Meetings are held approximately every third month. Both NGOs and RTE state that this committee helps to establish an environment of cooperation rather than opposition. However, it has only advisory competence.
The committee has three main tasks:

- Identify good practices on bird protection measures to prevent negative impacts of overhead lines.
- Mediate conflicts that arise locally on specific grid lines.
- Promote good practices identified in the regions with the aim of a nationwide implementation.

Box 12: Building up capacity for NGOs
In order for NGOs to have the capacity to deliver input, RTE and ERDF are financing a full-time employee, who is working under an LPO supervisor. The dedication of a full-time employee for CNA matters was requested by the president of LPO during a CNA conference, organised in 2009. It was then discussed between RTE, ERDF, FNE and LPO during 2010. The position was

[18] http://www.audeladeslignes.com/#

established in September 2011 for three years. He is working exclusively on resolving issues regarding birdlife and RTE/ERDF infrastructures, and finding best practices, etc. If the experiment is successful, the CNA will consider renewing the position.

In 2010, RTE initiated a cooperation with the French Federation of Regional Natural Parks. They cooperate on research and elaborate on ecological impacts during power line construction, or maintenance on park grounds.

RTE organises trainings for their providers in charge of managing trees under overhead lines together with LPO employees. The aim is to train them on the best methods on trimming trees under overhead lines, while respecting nature in general, and birdlife in particular, e.g. respecting the reproduction periods, preserving ponds, and preserving dead trees (for insects). The training is financed by a French national fund for professional training.

4.5. Change Process and Internal Structures

Due to the growing opposition against its new projects, RTE is currently considering new ways to strengthen its cooperation with different stakeholders at national and local levels. New approaches are based on recent research, e.g. on Deliberative Democracy and testing out new tools like the citizen conferences (see box 7).
RTE has established managers for regional public affairs to cooperate with external stakeholders. These managers work continuously in the regions establishing long-term relationships - thus supporting the work of project managers in the realisation of projects in the region.

Box 13: Internal reorganisation
RTE recently initiated a reorganisation of its departments on a national level. This led to the creation of a "Département Concertation et Environnement" (DCE – Stakeholders and Environment department), which is specialised in cooperation with stakeholders. This department is at the centre of the development and engineering department, so that environmental and social matters are taken into account as soon as possible during a project. These changes reflect the will of RTE to improve cooperation with all the different stakeholders involved in the development of the transmission system from the very outset of a project.

To improve the environmental planning in-house, RTE now aims to hire people with an ecological background. In order to spread this new approach internally, workshops for project managers are regularly organised. During these workshops, new ways of involving stakeholders are presented.

Both RTE employees and NGO representatives acknowledge the efforts RTE has done during recent years to become a trusted partner – even though NGOs, in particular, see room for improvement in many respects. However, RTE is slowly perceived as an independent expert on energy and no longer as an integral part of the French industry around nuclear energy.

5 Germany

Transmission System Operators: 50Hertz, TenneT, TransnetBW (not RGI member), Amprion (not RGI member)
Energy mix: 66.6% Combustion Fuels, 15.0% Nuclear, 13,5% Geoth./Solar/Wind/Other, 4,9% Hydro[19]

Project name: Uckermarkleitung/ Westküstenleitung
Location: Eastern part, Land Brandenburg/ Northern part, Land Schleswig-Holstein
Timeframe: 2006 – 2016/ 2011 - ~2015

Interview partners

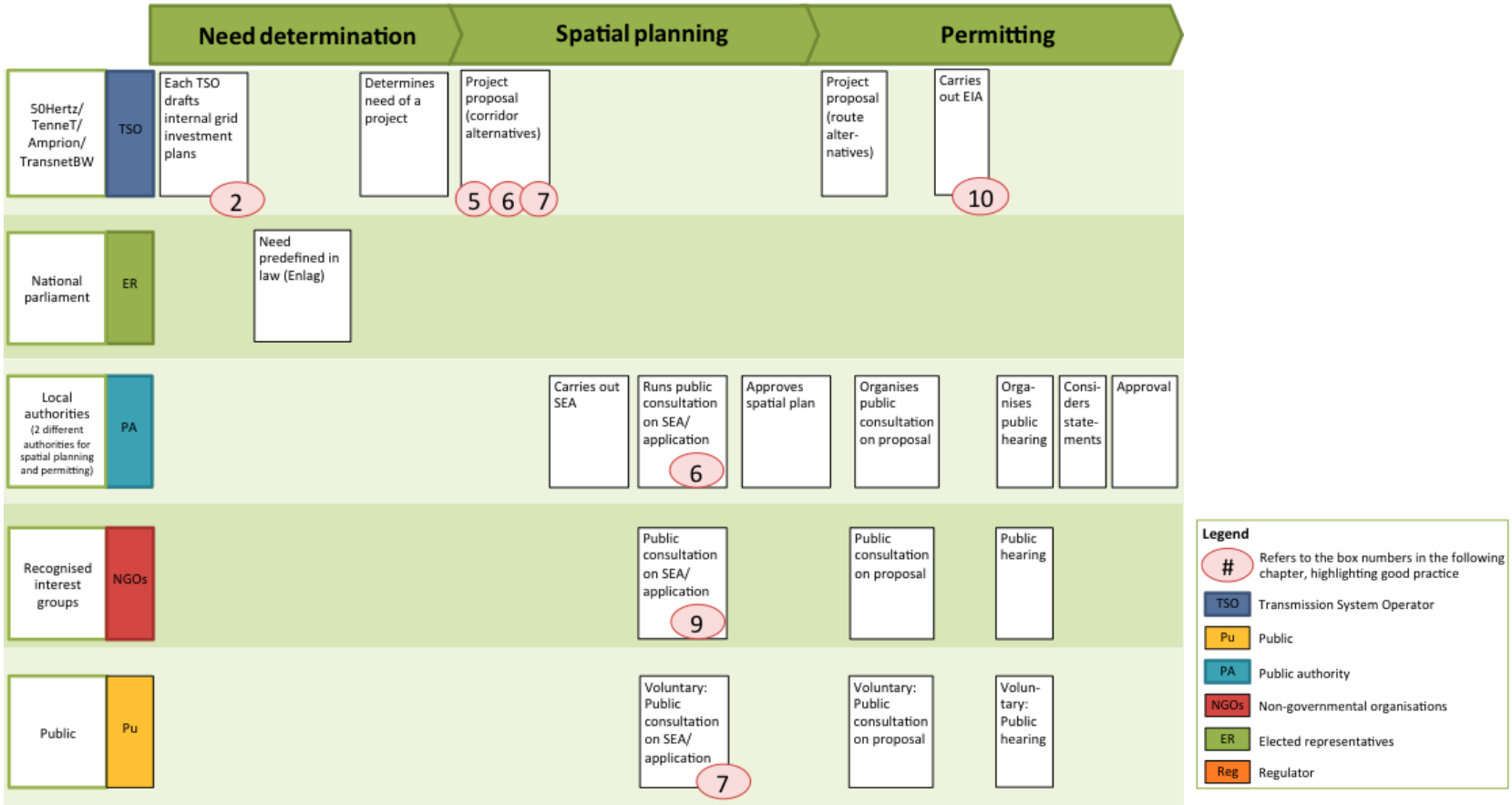
- Dr. Dirk Manthey, 50Hertz, Project Communications
- Elke Korn, 50Hertz, Project Manager Thüringer Strombrücke
- Martin Groll, TenneT, Public Affairs
- Marius Strecker, TenneT, Stakeholder Integration
- Rotraud Hänlein, Deutsche Umwelthilfe, Project Manager "Forum Netzintegration"
- Dr. Peter Ahmels, Deutsche Umwlthilfe, Head of Renewable Energies

The subsequent charts illustrate the most important steps in the planning and permitting procedure of Germany. More details on these process steps are explained in the text below. The highlighted numbers refer to boxes in the text which show good practices.

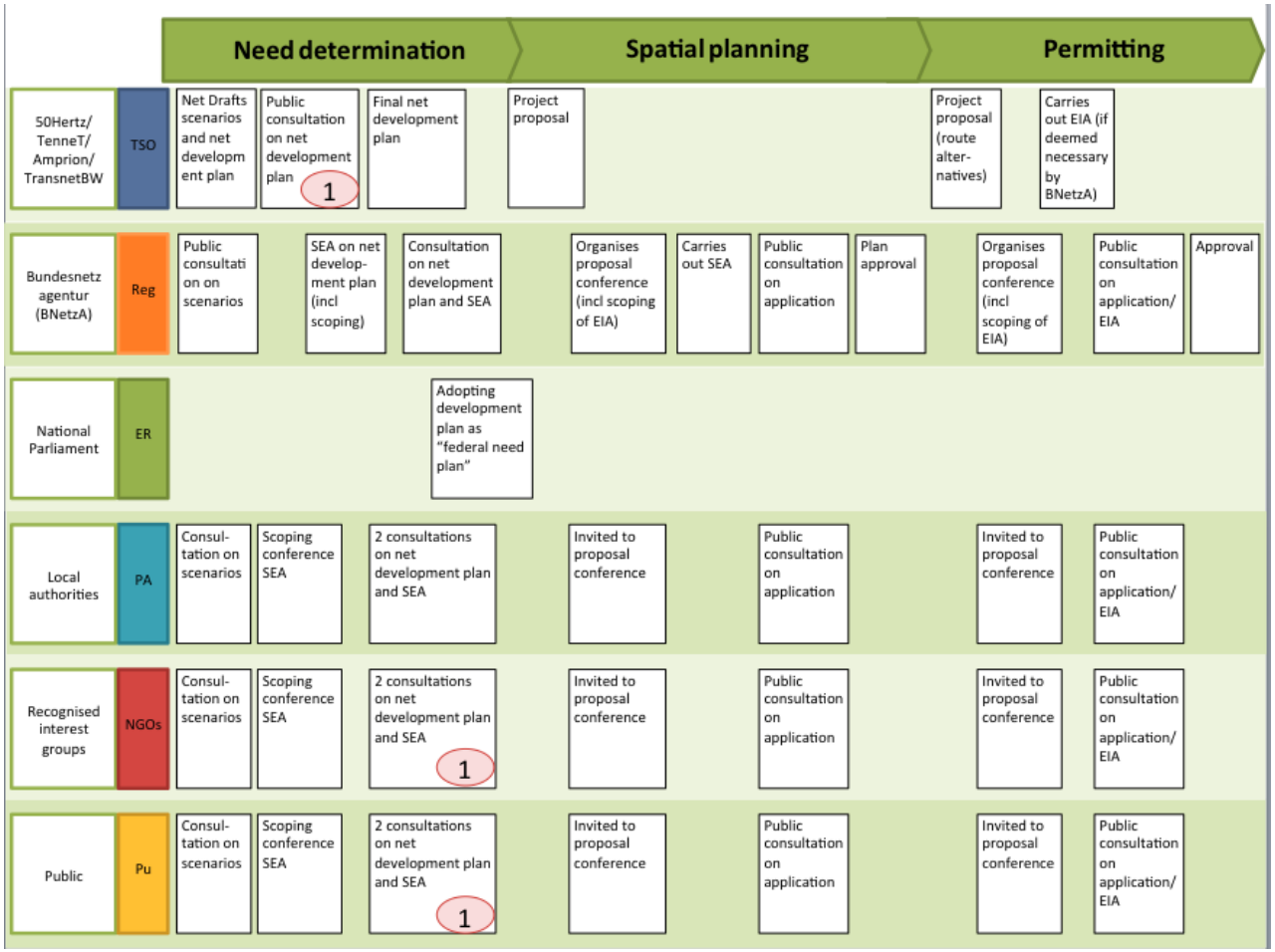
[19] International Energy Agency (2012) *Monthly Electricity Statistics July 2012*.

5.1. Planning and Permitting Procedure: Overview

Procedure under the "EnLAG"



Procedure after introduction of the "NABEG"



5.2. Terminology

Bundesnetzagentur (BNetzA) – Federal Network Agency
The German regulator. Under a new law introduced in 2011, the agency serves as a potential "one-stop-shop" for identified projects of "regional or European interest" (see also paragraph on the NABEG below). If agreed by the federal states, it will be the primary authority responsible for need determination, spatial planning and route permitting.

Energieleitungsausbaugesetz (EnLAG) – Energy Grid Extension Act
The German law, which came into force in 2009 to address an investment bottleneck blunting grid modernisation and expansion projects. It determined 24 prioritised extra-high voltage grid expansion projects of national interest for which TSOs no longer have to prove the need.

Land/ Länder
Germany has a federal political system with 16 states (= "Länder"). The Länder previously had the competencies for the permitting of very high voltage grid expansion projects. However, the NABEG introduced an option to shift this responsibility to the federal level for projects of national or European significance.

Netzausbaubeschleunigungs-gesetz (NABEG) - Grid Extension Acceleration Act
The German law established in 2011. It introduces a new spatial planning and permitting procedure for grid projects of national or European relevance. Among the new elements are more participation options for the public. The law foresees that planning and permitting authority is bundled into the BNetzA. However, the Länder (federal states) have to agree on this procedure before it can be applied. In conjunction with the introduction of the NABEG, the German law on energy economics was revised. A new process to determine the need in a grid development plan was introduced, prescribing three public consultations.

5.3. Planning and Approval Process and Interaction with Stakeholders

Together with the decision for the "Energiewende" (energy transition) in 2011, the German government adjusted and streamlined grid planning and permitting processes. Three major changes in the procedure are decisive: first, the option to shift permitting from the regional to federal level was introduced. Second, a procedure for the development of a national ten-year grid development plan was established. Third, all phases require an increase in stakeholder consultation.

However, for projects covered by the EnLAG, the currently applied procedure remains valid. Therefore, both procedures will be described throughout the document and it will be pointed out how the new legislation tries to introduce new solutions.

5.3.1. Need determination

Within the EnLAG, the national German government determined 24 projects of national priority. For these, TSOs are not required to prove the need during the permitting procedure anymore. The projects were identified based on a study conducted by the German energy agency (dena). Dena is partly funded by the energy industry. Transparency regarding the underlying data is limited. Therefore, doubts remain among environmental NGOs and the population about the accuracy of the study and thus the need of the identified priority projects.

Under new legislation introduced in 2011, the need determination process has been changed significantly. External stakeholders, including the public, can now get involved at a very early stage of the process. The four German TSOs[20] are jointly responsible for drafting a national grid development plan. Their work is supervised by the BNetzA. Early and regular stakeholder participation is a key element of the new procedure. As a first step, TSOs developed different scenarios on future generation, consumption and load factors, on which the BNetzA has conducted a public consultation. For the first time, trustworthy parties were allowed access to actual data underlying the scenario calculation. In its approval document, the BNetzA summarised all objections and showed how the TSOs adjusted their first scenarios according to the feedback. However, NGOs still point out that not all of their comments have been sufficiently addressed in the further process. In particular, they criticise that their request for the consideration of alternatives which would reduce the need for grids, has not been considered sufficiently.

Box 1: Public involvement during grid development plan

A first draft of the grid development plan was published in May 2012. This included a second public consultation conducted by TSOs. People could submit comments online on a dedicated website[21] or send them by mail. All major steps like the first publication of the draft or the publication of the consultation report were accompanied by a series of public events organised by the four TSOs. The methodology for drafting the plan as well as content were presented during these events. An "easy to read" executive summary was delivered. Sometimes, political representatives were present to answer questions as well. Moreover, the media was briefed on the procedure and methodology of the first draft by the four TSOs. A total of 2,100 comments were submitted during the consultation of the first draft. Afterwards, the TSOs summarised these comments, revised the draft accordingly, and resubmitted it to the BNetzA.

The BNetzA organised another public consultation on the second draft and adjusted it based on the results of this consultation. The resulting BNetzA-approved grid development plan is then presented to the federal government. On this basis, the government has to

[20] Amprion, 50Hertz, TenneT, TransnetBW

[21] www.netzentwicklungsplan.de

propose a draft law on the "federal grid plan" ("Bundesbedarfsplan"), which has to be adopted by the national parliament. [22] For the projects included in this law, the need is legally determined, and TSOs are not required to prove it further. This new procedure aims to substantially increase the legitimacy of the grid need it determines. German NGOs confirm that the new process is an important and significant step in the right direction. They nonetheless highlight room for further improvement, both with respect to the consultation process as such, and the outcome of the plan.[23]

Box 2: New position at Germanwatch to engage in the process

The new legal and political procedures create different options for input from NGOs and the public. These require considerable resources from NGOs in case they want to give substantial input. Some NGOs have thus started to allocate additional resources accordingly. Germanwatch has established a new position for a policy officer, who deals with electricity and grids. This gives them the opportunity to accompany the procedure to establish the national grid development as well as political discussions at the national and European level actively. In addition, the new staff is able to allocate significant time to RGI projects, thus helping to enhance dialogue on different levels between TSOs and NGOs and the community.[24]

Box 3: TenneT scientific study to confirm need

Recognising that sound scientific proof is necessary to convince affected populations of the need for a specific power line, TenneT initiated a new approach on the western coast of the federal state, Schleswig-Holstein before the NABEG was introduced.

In 2010, local distribution network operators commissioned an institute to conduct a scientific capacity study[25], which resulted in an energy scenario for 2020 that predicts 9,000 megawatts of wind energy in Schleswig-Holstein. Afterwards, the regional government asked all grid operators to develop an integrated net concept for this specific scenario. The institute had already conducted a study for wind energy in 2010. This study was mostly confirmed by the new report. Therefore, the need basis for the net planning is normally not questioned.

Box 4: 50Hertz online publication of load flow data

In Germany, one continuous topic of discontent in discussions with stakeholders has been that load flow data is not publicly available. Both environmental NGOs and citizens pointed out that they could not judge the need of a new line or the

22 Overview of the procedure in Annex V

[23] Comment DUH: http://www.duh.de/uploads/media/Stellungnahme_duh_nep_final.pdf; Germanwatch: http://germanwatch.org/de/download/6352.pdf

[24] Also other NGOs which have not been part of this project so far (e.g. Nabu/BirdLife Germany, BUND/ Friends of the Earth Germany) have built up their capacity.

[25] Source: Study commissioned by EON Netz GmbH, conducted by Windtest Kaiser-Wilhelm-Koog GmbH, more information: http://www.schleswig-holstein.de/MWV/DE/Startseite/downloads/111005_Netzentwicklungsinitiative_SH_blob=publicationFile.pdf

connection between the expansion of renewables and new grids if the data was not available. As a response to this, 50Hertz started publishing its load flow data on its website[26] in April 2012. In an interactive map, users can retrace the past flows on the electricity lines. All extra-high voltage lines are shown with their capacity utilisation. The user can download information for a specific point in time or animations on the development over a period of time. Lines are shown in colours (green for low capacity, red for high), exact numbers of the transmitted load are additionally available. All data can furthermore be downloaded as interactive excel spreadsheets. Data comes from the transmission control centre from 50Hertz and is updated on a daily basis. One interesting element of this initiative explained by 50Hertz is that most of the data was available also before installation of the tool – however, only in printed report format. 50Hertz notes that the new format is better received and appreciated by the different stakeholder groups.

Box 5: Early and general grid information by 50Hertz

To overcome the lack of knowledge about the need for grids and the permitting procedure, more general information events for the public have been organised lately without direct relation to a specific expansion project. Local NGOs, or the regional divisions of the Chamber of Commerce, have taken the initiative in some regions. 50Hertz is actively organising or participating in these events, so that the bigger picture of the energy policy along with the need for grids is explained in more detail. The planning procedures and the options for people to participate are likewise presented in a more general format, in order for people to better understand how to get involved in specific projects as soon as they start in their region. Aside from these events, 50Hertz developed some easy to understand flyers related to key aspects of grid infrastructure, such as technical options, health aspects, environmental aspects, and arguments for overhead vs. undergrounding.

Box 6: An environmental NGO as moderator: the role of the German Environmental Aid (DUH)

The German Environmental Aid (DUH) plays an unusual role in the discussion about grid expansion in Germany. In 2008, the DUH founded the "Forum Netzintegration Erneuerbare Energien" (Forum for the Integration of Renewable Energies), a discussion platform for different stakeholder groups which are affected directly or indirectly by power lines. This was the first German initiative that has brought together TSOs, environmental NGOs, industry associations, citizen action groups, and scientific institutions to jointly discuss grid related matters. One of the key outputs was a position paper[27], signed by the majority of the participating stakeholders.

The DUH has adopted the role of explaining to the public the

[26] www.50hertz.com/lastflussdaten

27 http://www.forum-netzintegration.de/uploads/media/PLAN_N_engl_01.pdf; monitoring report of the requests published in 2012: http://www.forum-netzintegration.de/uploads/media/Bilanz_Plan_N_2012_01.pdf

connection between climate change and the need to extend the existing grid. To reach out to a wider audience than those groups that could directly participate in meetings, the DUH publishes a series of information material. These explain different topics, such as the need for grids, German planning procedures, and underground cables (see also box 8).

5.3.2. Spatial planning

The construction of 380kV transmission lines requires a so-called Regional Planning Procedure, which results in a designated corridor. Mandatory public participation is limited to furnishing information about the plan and providing an opportunity for the interest groups to comment. The final published plan has to contain information on how statements were taken into consideration. Part of the procedure is an SEA. After the SEA has been conducted, a public inquiry on the SEA is held, normally together with the inquiry on the other application documents. There is, however, no legal request to involve the public in the scoping of the SEA. The exact procedure varies within the different Länder.

Box 7: Gaining knowledge on regional peculiarities

To generally get a better understanding of the concerns and requests of the local population, 50Hertz is collecting information on regions with the help of different tools. On the one hand, contacts to regional authorities and stakeholders, such as industry associations, are initiated at the beginning of the spatial planning. In one-on-one discussions, working relations are established. On the other hand, in-depth interviews and surveys are increasingly employed to get a better understanding of the information needs of the local population.

In a first survey in Thuringia, questions around the information needs of citizens, about major concerns, and about the overall reputation of 50Hertz, were asked. The plan is to conduct a survey at the beginning of each project, so that regional peculiarities can be determined and the information strategy adjusted accordingly.

Box 8: The role of the German Environmental Aid (DUH) on the ground

In addition to its activities to support the need and general grid expansion discussions (see box 6), the DUH plays a role "on the ground". It organises information events, which deal with the grid discussion in general as well as planning procedures for specific corridors. In addition, both the state Lower-Saxony and municipalities in Schleswig-Holstein invite the DUH to moderate their events in cooperation with the TSOs 50Hertz and TenneT. DUH, 50Hertz and TenneT confirm that the nature of discussions often changes when information is provided by an environmental NGO, which normally is considered more trustworthy than a private company.

Under the EnLAG, public consultation is limited to written comments on the Regional Plan suggested by the TSOs. In the new NABEG-procedure, the BNetzA will

have to organise public proposal conferences before proposals are officially handed in. The public will be informed and invited to the conferences both through newspaper announcements and via a website. Recognised interest groups will receive proposal documents prior to the conference. Based on the outcome of the conference, the BNetzA will decide on the scope of the SEA and application. Once completed documents have been received, they have to be publicly displayed and published online. As in the EnLAG procedure, written comments can be submitted. In addition, a public hearing has to be organised.

Box 9: TenneT early cooperation with regional politics in Schleswig-Holstein

Following the scientific study to confirm the need for grid development (see box 3), TenneT and the government of the federal state Schleswig-Holstein, took a new approach for the planning procedure in Schleswig-Holstein. In September 2010, the net development initiative was established. It aimed at accelerating the grid extension to be able to facilitate the wind energy generated by 2015. The government initiated a consortium which consisted of the TSOs TenneT and 50Hertz, DSOs, national and regional associations of renewables and wind generators, regions and municipalities, and the regional Ministries for Economics, Environment and Interior. In January 2011, different corridor options developed by TenneT were presented for the first time to the wider public via a press release. Two months later, the plan was discussed with the parliament together with the Minister of Economics. The parties agreed on a "net development acceleration agreement", in which common aims, rights and duties were agreed upon.

One major part of the document is the agreement on advanced public participation and the determination of a pilot region on the western coast of Schleswig-Holstein in which new formats of public involvement shall be tested (see box 11).

In general, TenneT reported good experiences with a regular exchange on a political level. Throughout the process, TenneT met members of the regional parliament regularly in one-on-one meetings or at public events. They briefed them on the project, which fostered support and goodwill from the politicians.

Box 10: Early involvement of local politicians and authorities in Schleswig-Holstein

Within the new approach, the involvement of stakeholders has been shifted to the pre-application phase. After the acceleration agreement had been signed, TenneT took part in sessions organised by county councils. TenneT would present the rough concept to local politicians and authorities without having a clear decision on possible route corridors. Also during this phase, mayors were informed at an event, which was jointly organised by the Ministry of Economics and TenneT. TenneT presented information material on their studies and plans and explained their preferred route corridor.

Throughout the ongoing process, TenneT was invited to several events organised by counties to

present their current planning proposal and answer the citizens' questions. The counties moderated these events.

Box 11: Early information and involvement of the public in Schleswig-Holstein

To inform the public, a website was established by the government, and public events were organised. In each county, at least one event took place. The Ministry of Economics[28] moderated the events. TenneT noted how it found it very helpful that the ministry made it clear that the "how" could be discussed during the events whereas the "if" question was not up for debate. This, however, could have been discussed at other occasions with policy-makers or during the process of establishing the national grid development plan. Citizens were informed about the events through newspaper announcements. Normally, community centres served as venues. There was a strong interest in the events with up to 200 participants. Often, citizens arrived early in order to get a first idea on the plan, which was publicly displayed and illustrated on a poster. TenneT would normally participate with two project managers – one for technical issues, and one for permitting themes – one press contact, and one person responsible for political contacts and environmental planners.

On the website[29], the aims and rationale behind the net development initiative are explained, and regular updates on agreements and events given. Moreover, the site informs about future steps in the process and options for citizens to get involved. An email address and telephone number were established to which citizens can send their objections or questions. TenneT so far answered all the questions, documented them and developed a set of frequently asked questions that will be posted on the website. At the next planning steps, these questions and the feedback will be considered.

To inform their stakeholders regularly on project updates, TenneT has established a project newsletter. The mailing list is constantly updated with stakeholders, which attend meetings or events.

Box 12: Bürgernetze (citizen grids): sharing investment benefits with citizens

In Northern Germany, particularly in the federal state Schleswig-Holstein, the concept of "Bürgerwindparks" (citizen wind farms) is very common. A core element of this concept is the participation of citizens in the conceptual design, organisation and funding of wind parks. At the moment, TenneT is working on a concept of how to transfer this approach to grid projects. TenneT plans on publishing the concept by the end of 2012 and intends to implement it on the western coast of Schleswig-Holstein.

Box 13: Internal mechanism for fast response: The 48 hour rule

50Hertz has introduced an internal 48-hour rule for responding to external requests. While complex questions can normally not be

28 After elections in 2012, the Ministry of Energy Transition, Agriculture, Environment and Rural Areas is in charge

29 http://www.schleswig-holstein.de/UmweltLandwirtschaft/DE/Energie/Ausbau_Stromnetze/Ausbau_Stromnetze_node.html

answered within this period of time, the rule prescribes to give a personalised answer showing that the question has been received and indicating a time when a sufficient answer can be expected. Internally, the rule helps to enhance the feedback from different divisions.

Box 14: Personal contact person
On their project websites, which normally go online when the Planning Approval Procedure is initiated, personal contact details of the project manager or the project communication manager are published together with a photo of the person. The idea is to help people e.g. during information events since they then know whom to approach.[30]

5.3.3. Permitting

The Plan Approval Procedure determines the exact location of a transmission line and possible compensation for environmental damage. Within the EnLAG, this procedure is officially the core element concerning public participation. After a project proposal is handed over to the authority, other authorities are polled for feedback. The affected municipalities are required to publicly display the plans. This display phase is preceded by a public announcement through the relevant newspapers, the community newssheet and the municipal black board. The permitting authority takes its decision on the basis of the gathered comments. All approval documents have to be displayed once again. An EIA has to be conducted. The herein requested public consultation is only conducted by the time the assessments have been finalised.

Under the NABEG, an open proposal conference will have to take place before the project application is officially handed in. Scoping of the EIA and siting alternatives are to be discussed during the conference. Based on the input, the authority determines the final scope for the official application. It can decide to skip the EIA if relevant matters on the Regional Plan have been sufficiently covered in the SEA. Documents have to be sent to public authorities and regional interest groups and must be publicly displayed and published online for a further round of consultation. Approval is granted by the BNetzA.

Box 15: Joint information event from the Ministry of Economics, a citizen action group and 50Hertz[31]
At the "Uckermark"-line, in the course of regular common activities with the Ministry for Economics of the Federal State of Brandenburg, 50Hertz organised an information event together with a citizen action group and the Ministry. Several employees of the permitting authority and representatives of environmental NGOs were present as well.
The event was split into three parts: A short introduction by the hosts on the current status of the project, small groups to discuss topics in more detail and a final concluding plenary session. The four thematic

[30] http://www.50hertz.com/de/1601.htm

[31] http://www.energie.brandenburg.de/sixcms/detail.php/bb1.c.284309.de

groups dealt with i) health issues/EMF, ii) the economic impact, iii) the impact on nature, and iv) routing. In the groups, open questions could be submitted. In every group, representatives of the planning authority, 50Hertz and the Ministry of Economics were present to answer the questions. Moreover, external experts, e.g. on EMF or cartography, were invited to provide a more independent perspective on controversial points. Both the event as such and the small groups were moderated by professional, independent moderators.
In addition to the information given during the presentations, a public exhibition was organised dealing with different topics, such as the routing, the planning adaptations that came out of the participation process, and mitigation measures or EMF. In general, the event was perceived very positively. However, it was often criticised that this kind of event took place too late in the process.

Box 16: 50Hertz's road show to inform and meet the concerns on EMF[32]
In summer 2012, 50Hertz went on a road show to address citizens' concerns about the negative health effects of a project and to inform about the current status of the "Uckermark-line". With a moving exhibition in a truck, 50Hertz visited different municipalities in Brandenburg, which would be affected by the project. The core element of the road show was a measuring device, which shows exact EMF values. 50Hertz intended to reduce the fear people have of the radiation, which cannot be seen or felt directly. By showing exact numbers, 50Hertz created more transparency.

Box 17: Study on public acceptance for grid expansion projects
For the project "Thüringer Strombrücke" planned by 50Hertz, together with two local foundations Germanwatch has commissioned a study on public involvement during the planning and permitting process of this power line. With the help of media analyses, the analysis of political and legal documents and interviews with involved actors, a 50 page report has been developed. The authors of the study identified chances and obstacles of participatory approaches during permitting procedures. Focus was put on informal participatory elements. A main finding of the study is the fact that the public needs to be involved in the discussions early on before any final decisions have been taken. This also refers to the questions of the general need of a specific power line. Concluding remarks contain recommendations for politics, authorities and TSOs.

5.4. Nature Conservation and Environment

5.4.1. Strategic Environmental Assessment

Parallel to drafting the national grid development plan, an SEA is conducted by the BNetzA on the plan. A scoping conference is organised at the beginning of the process, in which stakeholders (mostly local and regional

[32] http://www.50hertz.com/de/2895.htm

authorities and NGOs) can discuss the scope and methodology of the intended SEA. The event is also used to enhance the data exchange between authorities. In the SEA, ellipses around two connection points, that the grid development plan foresees, are taken as the geographical scope explored by the SEA.

Another SEA is conducted as part of the Regional Planning Procedure for single projects. The scope here is narrowed down to several corridors. This SEA is carried out by the responsible authority.

Box 18: Early discussions with environmental stakeholders in Schleswig-Holstein
In Schleswig-Holstein, the Ministry of Environment organised a meeting for mayors, citizens and environmental NGOs in which participants dealt with questions around the environmental impact of the future line. Even though the discussion was quite vague since the corridor had not been chosen yet, stakeholders gave positive feedback on this event and were glad to be informed at an early stage of the process.

5.4.2. Environmental Impact Assessment

The EIA is part of the Plan Approval Procedure, which is coupled with the official permitting procedure. TenneT commissions an external consultancy to conduct the EIA. They reported positive experiences in commissioning local project planning offices, because of their in-depth knowledge of the peculiarities of the specific region. Sometimes, the people who conduct the EIA are also invited to information events to explain the procedure of an EIA as well as possible impacts on nature and the environment of the proposed line.

Box 19: Actively approaching environmental NGOs before EIA
When commissioning an external consultancy to carry out the EIA, TenneT suggests they get in touch with the environmental authority in order to get contact details of relevant local NGOs. These are then consulted at the very beginning, so that regional and local knowledge on the environment can sufficiently be taken into account.

5.4.3. Further initiatives to protect the environment

Box 20: Field trip with environmental NGO and forest authorities
50Hertz organised a one-day site visit of its ecological corridor management pilot project in the forests of Thuringia. A variety of stakeholders participated in the visit, ranging from BirdLife Germany to public authorities in charge of the forest, or the Ministry of Environment and Forestry. Based on the study of 2008[33], the pilot project is part of 50Hertz's new approach to improving the sustainability and environmental impact of existing transmission grid infrastructures. With the new trimming methods, trees are maintained up to a certain height at a safe distance from the

[33] http://www.50hertz.com/de/file/100304_OESM_Kurzfassung_deutsch_final_med.pdf

cables, allowing ecosystems to develop below and around the lines. These new steps are met favourably by the participants, who acknowledge the improvement in preserving the natural diversity and balance in those areas.

Box 21: Creation of five small lakes in the Siebendörfer Moor Landscape Protection Area

To compensate for some of the disruption caused by the construction of the 380 kV overhead line linking Krümmel and Görries, 50Hertz has earmarked an area covering 10 ha to create new habitats and improve sites used by migrating birds. The creation of five new lakes (total investment: EUR 100,000) returns some of the original character to the Siebendörfer Moor area and provides new habitats for cranes, ground-breeding birds and other open-country animals. This area is extremely important as a stopover for migrating birds and as a nesting site for sea eagles and bitterns.

5.5. Change Process and Internal Structures

TenneT has started to significantly change its approach towards stakeholder involvement. This goes hand-in-hand with an internal change process. This development was enhanced when the new position, "stakeholder integration" manager, was created. This manager coordinates the different approaches on stakeholder engagement of the project teams and thus establishes standardised procedures.

Jour fixes have been introduced not only for project teams, but also for regions to ensure the consistency in argumentation and approach across project teams. The jour fixes are also an important platform to exchange experiences and knowledge. Moreover, a jour fixe has been established on a strategic level, in which division managers (e.g. asset management, public affairs, or the legal department) come together and discuss continuous topics, such as EMF or the communication approach. Also current topics that come up on short notice, such as the high media attention surrounding offshore wind connections or compensation policies, are discussed in this jour fixe.

TenneT is also organising internal events for technical planners. These are held in operational centres to foster the exchange of information and spread the knowledge gained during specific projects. Participants are briefed in these meetings about the work on stakeholder integration and introduced to the challenges and best practices in integrating external stakeholders.

At the beginning of 2012, following the decisions of upper level management and the heads of the communication and permitting departments, the position of a project communication manager was established at 50Hertz. The assigned tasks deal with both the planning and the communication department. Mostly, the communication manager follows a pull approach, i.e. assists the project manager as requested. An ideal permitting procedure accompanied by the best-suited communication means has been developed. This tool will help project managers gain an

overview, with regards to which point in time communication measures and involvement can be most effective.

One part of the project communication is to foster the internal exchange and convince colleagues of the necessity of external stakeholder involvement. Success stories are very helpful in promoting envisioned process changes.

Box 22: Establishing a transparency officer
50Hertz has established the position of a transparency officer recently. This officer is responsible for the availability of data to the public, e.g. the visualisation of load flow data on the website (see box 4).

Box 23: Using external information material for internal communication
The exhibition, designed for the information event during the Uckermark project (see box 15), is now also used for internal communication. It was installed in the entrance area of 50Hertz corporate headquarters, so that all staff members could take a look at it. This leads to more awareness of external grid development communication activities and facilitates the option for other project teams to copy the concept for their own project.

6 Italy

Transmission System Operator: Terna
Energy mix: 70.9% Combustible Fuels, 14.6% Geoth./Solar/Wind/Other, 14.5% Hydro[34]

Project name: Chignolo Po-Maleo
Location: Region Lombardia (Provinces of Pavia and Lodi)
Timeframe: 2005 - 2009

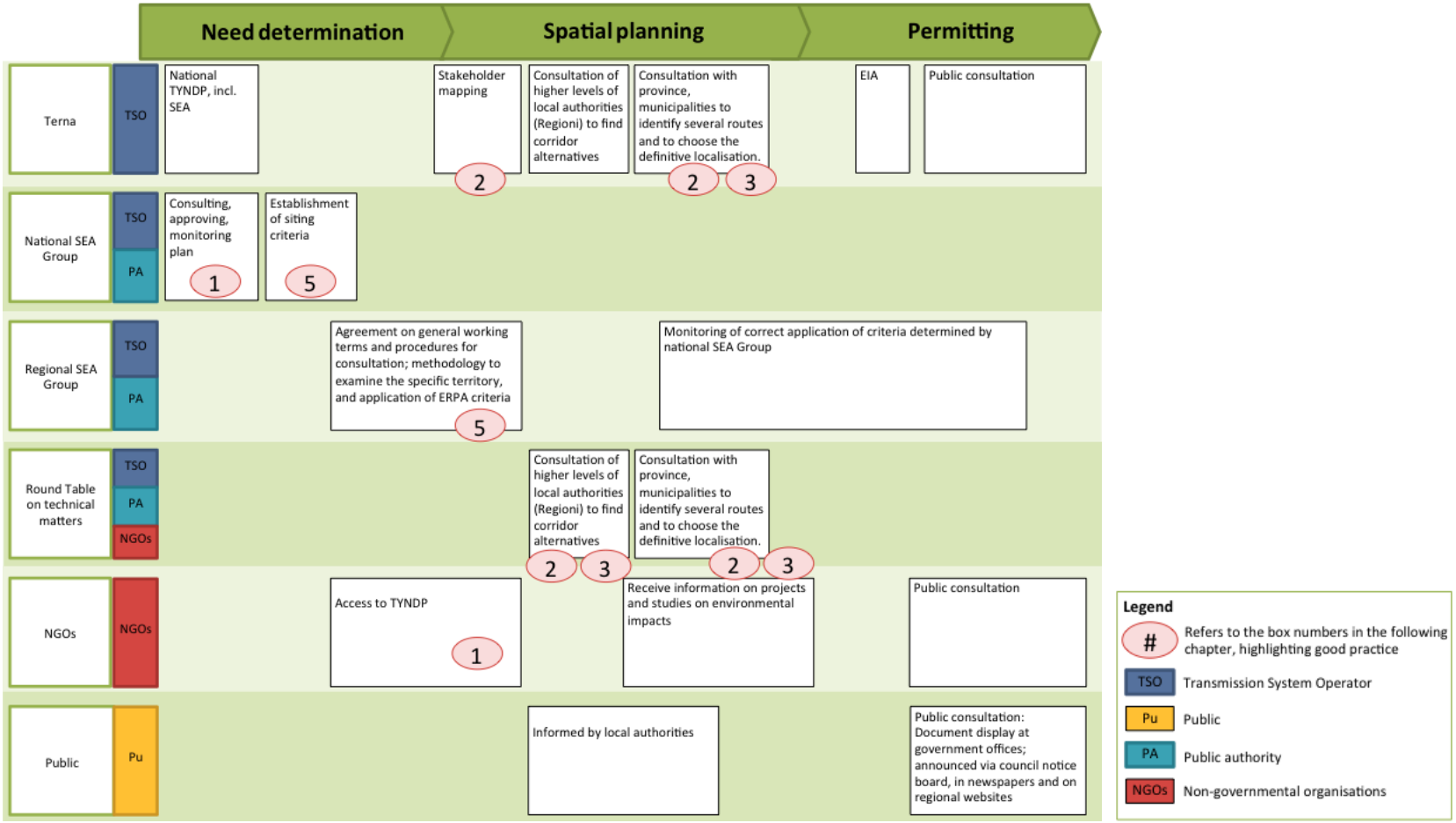
Interview partners

- Adel Motawi, Terna, Relations with Local Authorities Manager
- Fiorenza Roghi, Terna, Outsourcer (Relation with Local Authorities Unit)
- Nicoletta Rivabene, Terna, Head of Programs Coordination – Environmental Analysis and Studies (Grid Development and Engineering Department)
- Fulvio Rossi, Terna, Corporate Social Responsibility Manager (External Relations and Communication Department)
- Cristina Pascucci, Terna, International Regulation (Regulatory Affairs Department)
- Giuliana Improta, WWF, Head of Business & Industry Office (Corporate Partnerships Department)
- MariaGrazia Midulla, WWF, Head of Climate and Energy
- Irma Biseo, WWF, Corporate Partnerships & External Relations Director

The subsequent chart illustrates the most important steps in the planning and permitting procedure of Italy. More details on these process steps are explained in the text below. The highlighted numbers refer to boxes in the text which show good practices.

[34] International Energy Agency (2012) *Monthly Electricity Statistics July 2012*.

6.1. Planning and Permitting Procedure: Overview



6.2. Terminology

ERPA criteria
ERPA (Exclusion, Repulsion, Problem, Attraction) criteria include technical, economic, social, environmental and territorial issues that guide Terna in classifying territory and identifying possible corridors and power-line routes.

Memorandum of Understanding (MoU)
An agreement Terna signs after consultation and before starting the official permitting process with all relevant authority stakeholders with regards to the localisation of the line.

National SEA Group
This consists of the Ministry of the Environment, Ministry of Cultural Heritage[35], Ministry of Economic Development plus Italian Regions and Autonomous Provinces which have signed a Memorandum of Understanding with Terna. It was established by Terna to define a shared methodology for the implementation of a more transparent, coherent and participatory approach when conducting grid expansion projects.

Regional SEA Group
A group is established when Terna has a project in a region for the first time. Participants include Terna and representatives from the regions and local administrations. They ensure that measures defined at the National SEA Group level are adjusted and consistently applied at the regional level. Terna has reached agreements with almost all Italian Regions and Autonomous Provinces.

Round Tables on technical matters
These are established at the regional level for each project. Participation is similar to the Regional SEA Group. However, discussion content differs. The objective is to define the shared localisation of new grid infrastructures. They involve firstly Regions and Provinces on large-scale localisation, then municipalities.

6.3. Planning and Approval Process and Interaction with Stakeholders

6.3.1. Need determination

On a yearly basis, Terna drafts the Electricity Grid Development Plan, which is endorsed by the Ministry of Economic Development. An SEA is conducted on the plan, which is evaluated and endorsed by the Ministry of Environment and the Ministry of Cultural Heritage. Consultation in the need determination phase is focused on the SEA (see section 6.4.2.).

Box 1: Regular stakeholder meetings on a national level to discuss the SEA
The National SEA Group consults, approves and monitors the Grid Development Plan. It meets regularly to discuss all topics around the SEA, including the adjustment of applicable criteria when conducting the SEA and the application of the criteria in regional projects on the ground. For further details on the SEA, see chapter 6.4.2.

[35] Full names: Ministry of the Environment and the Conservation of the Territory and the Sea, Ministry of Cultural Heritage and Cultural Activities

6.3.2. Spatial planning

In 2002, Terna started creating a new approach to spatial planning, putting early involvement with authorities at different governance levels into the centre of the approval process. The objective was to establish a participatory approach to planning projects. To achieve this, consultations, dialogues and negotiations with regional and local authorities and other institutions were moved to the pre-authorisation stage. A transparent framework of so-called ERPA criteria (see 6.4.1.) was introduced to characterise the territory and thus determine corridors and feasibility routes in a transparent and cooperative way.

The applied criteria are established on a national level by the National SEA Group. They address technical, economic, social, environmental and territorial matters. Regional SEA Groups then ensure these national level criteria are properly applied on the regional level. Additionally, regional SEA Groups seek agreements on general working terms, the procedures for consultation, the methodology to examine the specific territory, and on the application of the ERPA criteria. Terna signs Memoranda of Understanding with these Regional SEA Groups that defines the mode of cooperation.

Box 2: Continuous stakeholder consultation on regional level

For specific expansion projects, Round Tables on technical matters are established. These become the core body for consultation. They manage the siting process including the identification of alternatives and mitigation measures. A detailed stakeholder mapping is the initial step for each consultation process. It identifies and analyses relevant politicians and local authorities. On this basis, it determines suitable strategies to approach each stakeholder group. While the Round Table serves as a starting point consisting of the same members as the Regional SEA Groups, the stakeholder mapping helps to identify which additional members have to be taken on board throughout the process.

In the first step, a consultation takes place mainly with Round Tables consisting of higher levels of local authorities (Regioni/Autonomous Provices) to find the best corridor alternatives (up to several kilometers wide). To do so, Terna approaches the Regional Round Tables with maps that suggest possible corridors and collects questions and concerns. Questions are then answered. This can also potentially lead to a commissioning of extra studies.

At a later stage, Round Tables also include lower levels of local authorities (provinces, municipalities and other bodies, such as park authorities). The goal is to identify several feasibility routes (tracks for the power lines) and finally to choose the definitive localisation of the new infrastructure.

At the most concrete level, a route of 200-300 meters in width is determined. At this stage, direct negotiations on a local level become essential.

Box 3: Exchange of information and data with regional authorities
One key element of the cooperation between regional and local authorities and Terna, is the exchange of information and data. On the one hand, authorities provide cartographic information, which is needed to conduct the ERPA assessments (see chapter 6.4.1 for details). On the other hand, territory analyses include field trips with Terna employees and representatives of local authorities. These serve to both raise relevant local data and establish good working relationships.

As a further element of the cooperative approach, a rationalisation plan is developed based on information and indications collected in the Round Table. In this plan, measures to reduce environmental impacts on the region are discussed. It is included in the Memorandum of Understanding and allows Terna to respond to some important local needs, e.g. discussing with the local authorities which existing lines cause solvable problems.

Box 4: Collaborative identification of compensation measures
Moreover, a compensation scheme is developed. Possible compensation measures are environmental and urban requalification. The amount of money Terna can spend on each project for compensation is strictly regulated. It is essential that the project is beneficial to all citizens and not only a portion of them. Possible measures are, for example, a public bike lane, a land use project, or contribution to a new road. Usually, the compensation is first discussed on the level of the region or province. A budget is set and a project is selected. The dialogue then usually moves to the municipal level under the coordination of the regions and provinces.

Terna aims to support mayors throughout the entire project, e.g. by producing information materials which help them to answer frequently asked questions of the population. Experience has shown that an established trustworthy relationship, e.g. between a mayor and a designated representative from the consultation office, can positively influence the cooperation.

Despite a signed Memorandum of Understanding, Terna has experienced cases whereby signatories sometimes change their mind and no longer intend to honour the initial agreement. Nonetheless, Terna regards the approach as a workable method to come up with the best possible project. A rejection of the previous agreement by the local authority or elected politicians is only possible if they find technical reasons that contradict it.

Direct interaction and dialogue with the public is still in its initial phases. Only recently has Terna started to actively contact the media and use this channel to inform the public about the projects. In the case of the Chignolo Po-Maleo line, the affected public was additionally informed via open meetings about the rationalisation plan. The head of province, all councils, mayors, presidents of natural parks, and some citizens were invited. Results of discussions with the Round Table,

such as the environmental analysis, the political analysis, and plans on where to dismantle lines, were presented. Terna noted that on this occasion the presence of the person in charge of environmental matters in the province of Lodi (who was also the president of the environmental NGO, Lega Ambiente) was a strong support. Her information was particularly trusted by the public.

6.3.3. Permitting

The permitting procedure consists of an Environmental Impact Assessment (EIA), a technical analysis and the easement of property. The EIA (see 6.4.3.) includes a public consultation. The procedure can also include a non-mandatory scoping. Public consultation at this stage is limited to publishing the required documents. These must be displayed at regional, provincial and municipal government offices and must be announced via the council notice board of municipalities, in newspapers and on regional websites. Some Regions (e.g. Veneto) require an obligatory public debate. In the environmental technical evaluation, representatives of all relevant governmental authorities physically meet up to jointly analyse the environmental aspects of the project.

6.4. Nature Conservation and Environment

6.4.1. ERPA criteria

In order to identify the corridor that has the highest degree of environmental compatibility and sustainability, ERPA (Exclusion, Repulsion, Problematic, Attraction) siting criteria are applied.

Box 5: Transparent siting process

The criteria are determined by the National SEA Group and cover technical, economic, social, environmental and territorial aspects. Working within the National SEA Group, Terna and the Regions agreed on a system in which the application of the criteria leads to a characterisation of territory in four classes:

Exclusion: areas in which any kind of construction is excluded.

Repulsion: areas where it is preferable not to construct, unless there is no alternative, or there are only alternatives that are even less environmentally compatible.

Problematic: areas in which the landscape is problematic therefore require further territorial analysis to establish whether the level of problems can be overcome or it is necessary to find alternatives. Unlike the other criteria, there is a need for further study, given the absence of an automatic mechanism of an a-priori assessment.

Attraction: areas to favour whenever possible after checking the area's load capacity (e.g. where bundling is possible).

Box 6: Database of cartographic information

To be able to work with this scheme, Terna established an extensive database of cartographic information, which is exceptional in Italy. Keeping the database updated is a continuous effort. The database today has a size of about five Terabyte and holds information on 1,500 different layers. It covers data

regarding geological, hydrogeological, nature environment, and landscape aspects. Terna has agreements with the Ministries for the Environment and the Ministry for Landscape, but also with individual regional and local bodies, to provide them with updated data. Data collection furthermore goes down to municipal offices to be able to cover specific local aspects.

Box 7: Transparent application of information during projects
Information contained in the database is applied on the areas under study via an automated Geographic Information System(GIS). The system applies set weights for each considered aspect, assigning a numeric value to the siting criteria. This is an essential element as it ultimately decides how an analysed territory is classified. The weights are therefore set by the National SEA Group and cannot be changed to avoid opportunistic adjustments on a local level. The data is shared so that regional bodies are able to repeat the territory analysis and check the results.

The assessment of possible siting alternatives is done by the Regional SEA Group. This group interacts with the National SEA Group ensuring an ongoing exchange of national and regional perspectives. The National SEA Group furthermore evaluates whether the implementation on the local level is in line with the criteria set on the national level.

Along the entire process, Terna consults with environmental associations to obtain further information on environmental sensibilities.

6.4.2. Strategic Environmental Assessment

Terna's yearly Electricity Grid's Development Plan is subject to an SEA. If there are no major changes from one year to another, the Plan can be submitted to an SEA evaluation by the Ministry of Environment to verify whether it needs to go through an SEA. It can be exempted from the SEA for a maximum of three consecutive years. Publication takes place online and documents are sent in hard copy to relevant stakeholders, such as regional, provincial and local authorities, municipalities, environmental authorities, natural parks, or the main NGOs. All of the stakeholders can hand in their comments and concerns. WWF Italy confirms that these reports are a good starting point to analyse Terna's activities and to discuss potential issues.

6.4.3. Environmental Impact Assessment

As part of the official project permitting procedure, Terna conducts an EIA, for which it commissions external consultants. To ensure consistence and high quality EIAs, Terna has built a database of recommended practitioners for each region. To guarantee that environmental studies are comparable across different regions of the country, Terna's internal environmental unit has developed operative instructions to ensure the same level of standards at each region.

The same environmental unit aims to provide studies and technical details on environmentally relevant topics to the territorial offices, which conduct the EIAs. This means that the unit approaches external experts to obtain study insights or educated opinions on topics where no studies exist.

6.4.4. Collaboration with environmental NGOs

Box 8: Continuous cooperation with WWF Italy

In 2009, WWF Italy and Terna signed a three-year cooperation agreement focused on a more sustainable development of the Italian grid. A working group was established for a continuous dialogue on:

- Integration of environmental criteria in the Electricity Grid's Development Plan (guidelines);
- Action plan to mitigate impacts in WWF protected areas and priority areas (national parks).

WWF Italy and Terna have been working together on projects within three of WWF's protected areas. Projects cover various topics, e.g. the installation of mitigation measures to reduce the impact on birdlife by putting up anti-collision spirals on power-lines and by placing nesting boxes on pylons. The joint project also includes the environmental education and promotion of these measures taken. Terna and WWF produced information materials on the projects and informed the public by a travelling exhibition.

Box 9: Information for WWF Italy's local offices through national cooperation

Terna regularly sends updates on a shared list of grid expansion projects to the national offices of WWF Italy. This office then forwards the information to their local member organisations. Resulting questions from WWF local bodies or requests to talk to Terna are addressed and organised via the national offices.

Together with LIPU, the Italian branch of BirdLife, Terna commissioned a scientific study on the interaction between high voltage lines and birds. For the first time on a systematic and large-scale level, the study monitored seven areas within Natura2000 sites and the risk of collision of birds with power lines.

Terna is now taking steps to more actively incorporate environmental protection from the very initial phases of new project development. This shall be done by actively working together with environmental NGOs to accompany grid expansion projects and thus to enhance efforts in pre-construction prevention and post-construction mitigation. Currently, Terna is discussing the joint development of concrete operational guidelines with the WWF.

6.4.5. Further initiatives to protect the environment

Terna strives to find solutions to environmental challenges by taking innovative approaches. To figure out how to hide a power station and at the same time rebuild a habitat – a task which the project team has no experience with - experts that have

dealt with similar objectives in other situations (highway construction, dismantled production plants) were approached. Jointly, new methods of applying the technologies in the specific situation were developed.

6.5. Change Process and Internal Structures

Terna decided to incorporate the EU Directive on SEAs into the system of grid planning six years before it was implemented in Italian law. It took 3-4 years to develop the new ERPA-based approach internally. In 2003, a first Memorandum of Understanding for cooperation with the Piemonte region was signed. From there, it was possible to report successes back to the organisation. Slowly, a team that would be fully dedicated to the new approach was built. One of the core arguments helpful in establishing the new procedure was the positive external feedback from regional authorities. These comments underlined their appreciation of this approach based on its clear criteria and consideration of environmental concerns.

Box 10: Environmental background of employees

In the different departments, a new generation of professionals has been hired. These include landscape-architects, environmental scientists, geologists, archaeologists, environmental engineers, natural scientists and biologists.

Each team member of the Relations with the Local Authorities Unit has an environmental background, given that environmental considerations have become the backbone of the entire approval process. During the entire process, every project is followed by persons with environmental skills from both the Relations with Local Authorities Unit and the Unit for Environmental Analysis and Studies.

Box 11 – ISO 14001 certification

Terna decided at an early stage that environmental protection could not be done "selectively" if it was to be taken seriously by the organisation. Instead, a holistic approach was needed. Terna, therefore, implemented an ISO 14001 Environmental Management System, which assures the ongoing monitoring of any environmental aspects and impacts Terna has.

7 The Netherlands

Transmission System Operator: TenneT
Energy mix: 91.1% Combustible Fuel, 5.3% Geoth./Solar/Wind/Other, 3.5% Nuclear, 0.1% Hydro[36]

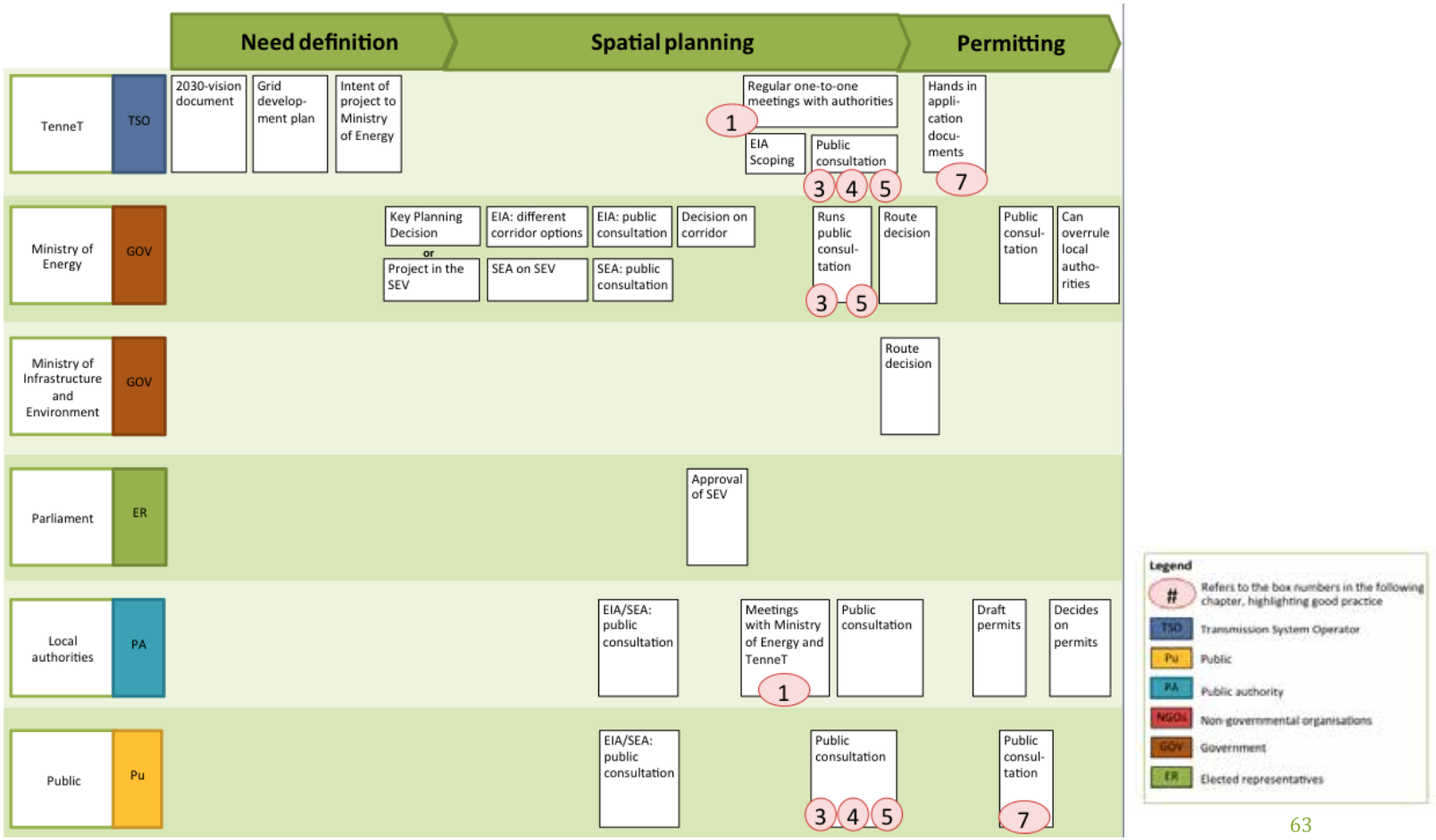
Project name: Randstad380 KV Northring
Location: Route between Beverwijk – Vijfhuizen - Bleiswijk
Timeframe: 2008 - 2017

Interview partners
- Camiel Masselink, TenneT, Stakeholder Manager

The subsequent chart illustrates the most important steps in the planning and permitting procedure of the Netherlands. More details on these process steps are explained in the text below. The highlighted numbers refer to boxes in the text which show good practices.

[36] International Energy Agency (2012) *Monthly Electricity Statistics July 2012*.

7.1. Planning and Permitting Procedure: Overview



7.2. Terminology

Netherlands Commission for Environmental Assessment (NCEA)
An independent expert body that provides advisory services and development capacity for environmental assessments. It has a legal status to act as an independent advisor issuing non-binding advice to government agencies responsible for environmental assessments, including EIAs and SEAs.

Rijkscoördinatieregeling – State Coordination Programme
The new permitting procedure introduced in 2008 shifting the involvement of regional and local authorities to the pre-application period.

Structuurschema elektriciteitsvoorziening (SEV) - Framework plan of electricity supply
The strategic plan of the government outlining the vision for the future electricity infrastructure.

7.3. Planning and Approval Process and Interaction with Stakeholders

Since 2008, a new procedure (Rijkscoördinatieregeling – state coordination programme) for the planning and permitting of high voltage electricity power lines has been in force in the Netherlands. One of the major changes to the existing procedures is that the consultation with regional and local authorities has been shifted to the pre-application phase. The Ministry of Economic Affairs coordinates the procedures and involves authorities in regular joint meetings. Moreover, the whole permitting procedure is being streamlined. One of the goals is for all decisions in the procedure to be taken at the same time.

In contrast to other countries, the EIA is also conducted before the start of the official permitting procedure. The Randstad380 project, which is the first big expansion project for TenneT in many years, is also the first project of TenneT that is being planned and implemented under the new procedure.

7.3.1. Need determination

TenneT is required to draw up a national grid development plan every two years and submit it to the regulator. This year's edition describes the period between 2012 and 2021. Moreover, for the long-term perspective, TenneT is providing a "Vision2030" document, which analyses developments affecting the Dutch electricity supply.

On the basis of these two documents and shorter-term assessments, the Dutch government decides on projects to be pursued. For this, a "Framework Plan of Electricity Supply" (SEV), a strategic plan which indicates spatial reservations for future connections, is drafted by the Ministry of Economic Affairs at irregular intervals. These plans are subject to an SEA. The final decision on whether a project is included and on which corridor is chosen is taken by the national parliament.

For projects that are not included in the SEV, a Key Planning Decision

(Planologische Kernbeslissing) is needed in order for them to be realised. The procedure is carried out by the Ministry of Economic Affairs after TenneT expresses the need for the project. Several route corridors are investigated and subject to an EIA. Before the final decision, the Ministry publishes the relevant documents and conducts a public consultation.

7.3.2. Spatial planning

For infrastructure projects of national interest[37], the Ministry of Economic Affairs provides the spatial planning competency.

In the Key Planning Decision, a corridor (varying from a few hundred metres up to 5km) for the projects has already been determined. TenneT's actions thus begin with the knowledge of the proposed corridor.

For the Randstad380 project, TenneT started the procedure by issuing its proposal to the Ministry of Economic Affairs to be included in the newly introduced state coordination programme (see 7.3.). In this procedure, the national zoning plan, the project EIA, and all permits are normally published together.

The group of stakeholders involved by the Ministry of Economic Affairs and TenneT was expanded along the process. Stakeholders included all relevant regional and local authorities, other infrastructure operators (e.g. Prorail which is responsible for the railway grid), as well as likely affected municipalities, farmers, or industry associations. Their relevance for spatial planning played a decisive role when selecting the different groups. The expansion of the group of stakeholders – except local authorities – was more of a natural than strategic progression. Whenever TenneT felt it was necessary to involve a certain group, they actively contacted these groups and organised meetings.

The Ministry of Economic Affairs organised meetings for local authorities at the very beginning of the process, informing them on the plan and their roles. They coordinated the process by setting rules, timeframes and milestones for the authorities. In later meetings, TenneT was also invited to give status updates on the planning and answer the questions of authority employees. TenneT used these early meetings to find out more about the region and its peculiarities. They learned about the pre-existing plans of the municipalities, e.g. planned industry parks, and could thus form a more detailed picture of the region.

Box 1: Early and proactive cooperation with local authorities

In the Randstad380 project, the Ministry of Economic Affairs and TenneT pursued a proactive approach in involving local authorities. Before the written application for licences was handed in, they spoke with all authorities and reached an oral agreement on all points included in the application. Meetings and involvement focused on two points:

1. Give information: Explaining the different aspects of the project, such as the need, process, procedures,

37 All electricity transmission projects of more than 220 kV

and critical issues like EMF or undergrounding.
2. Receive information: Gather information needed for routing like the actual spatial plans, local knowledge, future spatial developments, and interests.
Even though the Ministry of Energy theoretically has the power to overrule local authorities, this authority was never implemented with this participatory approach. The relationship is thus more sustainable and serves future projects.
Aside from the meetings organised by the Ministry of Economic Affairs, TenneT held regular one-on-one meetings with authorities to discuss relevant questions and mutually report on the current planning status.

Box 2: New pylon design Project Accompanying Plan
TenneT has developed a new kind of pylon, which will be used for the first time for the Randstad380 project. It is made from pairs of slender poles in white-grey. This is designed better blend in with the natural landscape scenery than traditional pylons. Since the pylon does not have broad arms on which the different cables are placed, the width of electromagnetic fields under the line can be reduced by up to one third.

After different route options have been identified, TenneT commissions an external consultancy to carry out the EIA. This is the point in time when the Ministry of Economic Affairs proactively involves the overall public for the first time.

Throughout the project, TenneT is distributing newsletters regularly, both electronically and in hard copy, e.g. as local newspaper supplements. Moreover, a project website is established. Brochures are also distributed explaining the project, the procedure, and options for the public to get involved.

In contrast to other countries, where the EIA is often part of the official permitting procedure, the EIA here is front-loaded to the pre-permitting phase and forms the basis for defining the route. In the so-called "start notitie" (scoping document), several route options are published, which the Ministry of Economic Affairs proposes to examine together with the spatial fitting plan and other permits. Before the Ministry decides on a route, the regional and local authorities are consulted on these documents. Afterwards a full public consultation is carried out. Via comments, the public may suggest other routes to be included or mention other aspects that need to be examined.

This process is accompanied by public information events. With certain stakeholders, the Ministry of Economic Affairs and TenneT are holding one-on-one meetings. These often follow up first contacts made at information events or contacts stemming from other channels. On basis of the received comments, guidelines for compiling the EIA are developed by the Ministry of Economic Affairs. After the EIA is completed, a second formal consultation is conducted on the EIA. The spatial fitting plan, other concept documents and finally the environmental report are published.

The latter contains a prioritised route with the least environmental impact. This is normally the route that the Ministry of Economic Affairs and the Ministry of Infrastructure and Environment adopt as the favoured route option. However, they are not obliged to do so and could propose another option if there is a justified reason. In parallel to the consultation, the EIA is assessed by the Netherlands commission for environmental assessment.

Box 3: Information markets

During the Randstad380 project, the Ministry of Economic Affairs in cooperation with TenneT started to hold their information events in the information market format. The events were announced in local newspapers, the project newsletter and on the project website. Normally, seven different stands were positioned throughout a venue, while providing adequate space for small groups to sit down and discuss different topics. The stands covered these topics: a) Procedures on need / planning / decision making / EIA / spatial plan; b) Routing; c) 3D-visualisation (see box 7); d) Landscape; e) Engineering and building the connection; f) EMF; g) Possibility to give comments.

At the different stands, experts (e.g. scientists for EMF, employees from permitting authorities for procedures and routing) as well as two employees from TenneT were present to answer questions. Stand-up displays provided supportive information.

In order to prepare for the events internally, the Ministry and TenneT developed Q&As for all employees who would be present. In some cases, employee training took place. This ensured consistency in the answers given by the different employees, while also attempting to minimise the possibility of being surprised by questions from citizens. If necessary, employees would be trained professionally by external consultants before the meeting. This was decided on a case-by-case basis and dependent on experience and the wish of the employees. Moreover, TenneT normally had dinner together with employees of the Ministry of Economic Affairs before the events to discuss the latest updates. Afterwards, the events were evaluated jointly. It was discussed whether new concerns had been heard, how the atmosphere was perceived, and if the number of participants met the expectations, so that the experience could contribute to improvements in the planning of future events.

Box 4: Personal meetings with opponents

Throughout the process, the Ministry of Economic Affairs and TenneT hosted a multitude of personal meetings with groups or individuals opposing the project or being affected by it. This could be initiated by request during public events. Also, the Ministry and/or TenneT took the initiative to proactively make contact as soon as it became clear that people with specific interests could be affected by a project.

Opponents of the project mostly appreciated these personal talks since the ability to ask questions and express personal concerns was granted. Even if they did not agree on specific issues, this helped

promote views that the process was at least fair.

7.3.3. Permitting

After the EIA, the Ministry of Economic Affairs and the Ministry of Infrastructure and the Environment jointly decide on the route. Afterwards, the permitting procedure for this route is initiated by TenneT by handing in the application document to the local authorities. Prior to handing in the document, numerous meetings were often held in order to realise a well prepared application that takes the demands of the authority into account. This cooperation promotes a mutual understanding and a rather smooth process. The Ministry of Economic Affairs coordinates the further process and publishes the draft permits from the authorities, which are up for a common public consultation organised by the Ministry. Normally, TenneT provides the answers to the comments issued during the consultation. For the Randstad380 project, they developed a special feedback system.

Box 5: Feedback system

Some 600 comments have been submitted for the Southring, and another 142 for the Northring of the Randstad380 project during the public consultation of the official spatial planning and permitting procedure. The Ministry clustered the comments into different themes and summarised the different answers to these themes in a report. People, who submitted a comment, received a personalised letter with a dedicated personal number as well as the overall report. Within the report, the personal numbers were included, so that people could easily find the sections, which contain answers to their questions. This approach addresses two challenges. Firstly, it provides transparency for the overall public, since they can get an impression of all the comments people have submitted. At the same time, they can see how these comments were taken into account by TenneT and the Ministry of Economic Affairs. Secondly, the approach ensures that all the comments are answered and people get personalised feedback.

The Ministry of Economic Affairs and TenneT see one key advantage in the intense interaction with stakeholders prior to handing in the application. That is, the fact that comments from the public consultation no longer surprise employees. Since all concerns have been heard, and in most cases previously answered in personal meetings or during public events, it is much easier to process and find answers to the comments in a timely manner.

Box 6: Close cooperation with the leading authority

In the course of the new Randstad380 planning and permitting procedure, TenneT has built up a close working relationship with the leading permitting authority, the Ministry of Economic Affairs. The project managers of both TenneT and the Ministry meet at least once a week. Moreover, the two project steering committees at TenneT and the Ministry meet regularly, once every two months.

Box 7: 3D Visualisation
The Ministry and TenneT have developed a virtual visualisation tool for its grid expansion projects. With the help of software, the planned power line can be viewed from different angles and distances. The users can steer the software and have a 360 degree perspective of the proposed line, including pylons. The software is used both during information events and on its project websites.

Box 8: Dealing with EMF
Even though the existing law in the Netherlands prescribes a critical value of 100 microtesla for an exposure of 14 hours or more per day, the Dutch government decided to follow a precautionary policy and stick to a critical value of 0,4 microteslar for the Randstad380 and other new 380kV projects. All home owners within the zone exceeding the 0,4 microtesla value can decide whether they want to move or stay – TenneT will honour the offer up to two years after the start of the operation of the power line.
Also to meet the people's potential concerns on the health effects of the electromagnetic fields, the new Wintrack pylon was developed which reduces the zone of EMF considerably (see box 2).

Box 9: Testing underground solution
Since many citizens continues asking for underground solutions for various reasons (fear of EMF, preservation of landscape, nature concerns), the Dutch government and TenneT decided to commission the Technical University of Delft to conduct a study on the technical feasibility of underground solutions for 380kV cables. The University came to the conclusion that the risks of cables could be borne by a distance of up to approximately 20 km for the Randstad380 project. The Ministry thus decided that this should be tested. TenneT and the Ministry faced difficulties in finding the right parts of the route for the underground solution. This is due to the issue that people living close to a proposed line, which would not be underground, felt they were treated unfairly. The final decision was taken by the Ministry of Economic Affairs. Criteria for the decision included e.g. technical necessity (for instance when crossing the North Sea canal), safety requirements in the area of the airport Schiphol, or the combination of other aspects, such as nature, recreational, and other densely populated areas among others.

7.4. Nature Conservation and Environment

7.4.1. Strategic Environmental Assessment and Environmental Impact Assessment

The Framework plan of electricity supply, which determines sites for major electricity infrastructure projects, is subject to an SEA. This is conducted by the national government.

The EIA for the project is carried out by employees of TenneT together with external consultants, which are selected by public tenders. Throughout the process, TenneT and the consultancy meet on a very regular basis to discuss all matters related to the EIA.

The high quality of the assessment is ensured in several ways: Firstly, there is an in-company EIA coordinator who works closely together with governmental counterparts. At the start of the first EIA procedure, he organised and wrote the first EIA. This still serves as a reference document to set high standards and to guarantee the high quality of subsequent EIAs. Secondly, specialists are only hired from acknowledged institutes, organisations and companies. Thirdly, the Commission for Environmental Assessments sets guidelines for the EIA after the consultation on the scoping document. When the final EIA is published, the Commission reviews the document and provides their decision and justification.

7.4.2. Cooperation with environmental NGOs

During grid expansion projects, NGOs get access to information and databases that are necessary to evaluate the EIA. Moreover, TenneT uses data, knowledge, and experience from NGOs such as SOVON, Bird Protection Netherlands or RAVON (Reptile, Amphibian and Fish Conservation Netherlands). TenneT exchanges geographical data in particular. For this, NGOs are contacted at the very beginning of the EIA for their input.

Besides involving NGOs in specific grid expansion projects, there is a big interest in TenneT's overall actions from the NGOs' side. Stakeholder managers have started talks with NGOs on a general level. Natuur en milieu is one of the first NGOs to be involved in these meetings that are not related to specific projects.

7.5. Change Process and Internal Structures

Until approximately ten years ago, TenneT's main task was maintaining the existing grid. The Randstad380 project was the first new large development in decades and can be described as an eye-opener in terms of stakeholder involvement. With this project, the awareness and recognition of the need for stakeholder management arose.

In general, TenneT does not see stakeholder management simply as part of the communication work, taking a rather holistic approach. This means that communication measures can be part of stakeholder management, but stakeholder management goes a step further by involving all departments in a project team in the interaction with the external world. Ideally, stakeholder management is a form of process management, aiming at interlinking the internal planning of the process with external interests. At the beginning, information is collected from external stakeholders to improve the grid planning. At a later stage, the planning is communicated to the outside world. For the stakeholder manager, it is important to initiate, steer and oversee these processes proactively, while also being able to think from the stakeholder's perspective. In addition, the stakeholder manager has to identify the impacts upon the diverse interests of stakeholders. For example, a change for a certain stakeholder may influence licenses, other interests, or have implications for the technical design of the new

connection. The stakeholder manager has to connect the different views of the disciplines involved.

In order to integrate project management into all new grid expansion projects, several stakeholder managers have been hired who work on specific expansion projects. Moreover, two of them work on TenneT's overall approach of involving stakeholders. The project team meeting with all disciplines involved takes place at least every second week. Additionally, the stakeholder manager meets regularly with the communications department to ensure that they mutually know what they are currently doing and to identify themes that need extra consideration, e.g. in newsletters.

Every second month, a meeting with all stakeholder managers takes place together with one employee from the communications department, the real estate department (which need to close private agreements with farmers for instance), a negotiator and someone from asset management. The agenda is to discuss overall developments in the projects that can have an impact on the stakeholder management approach, and to address other issues, specific cases, best practices, and to share knowledge.

Three times a year, all departments that interact with the external world (e.g. customer relations, public affairs) hold a meeting to align the positions, exchange experiences and ensure an integrated view of the outside world.

8 Norway

Transmission System Operator: Statnett
Energy mix: 96.8% Hydro, 2.1% Combustible Fuel, 1.1% Geoth./Solar/Wind/Other[38]

Project name: Ørskog – Sogndal (Fardal)/ Nettplan Stor-Oslo
Location: West coast, north of Bergen
Timeframe: 2005 - 2015

Interview partners

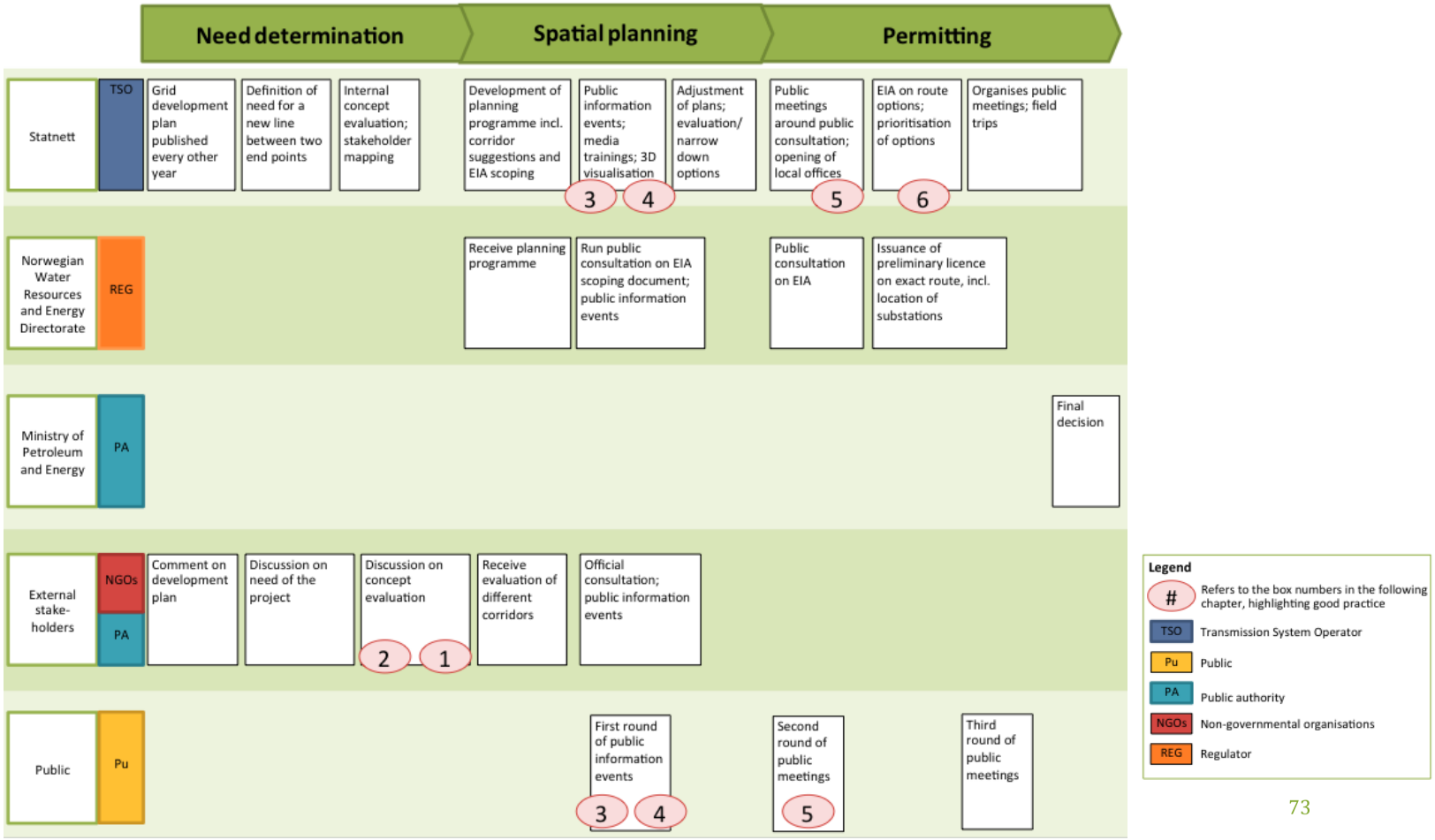
- Anders Grønstved, Statnett, Grid Development Department
- Christian Færø, Statnett, Project leader "Ørskog – Sogndal (Fardal)"
- Gunnar Romsaas, Statnett, Communications department
- Julie Evensen, Statnett, Project Coordinator "Nettplan Stor-Oslo"

- Ingrid Lomelde, WWF Norway, Head of Climate and Energy Department
- Håvard Lundberg, Bellona, Energy Advisor

The subsequent chart illustrates the most important steps in the planning and permitting procedure of Norway. More details on these process steps are explained in the text below. The highlighted numbers refer to boxes in the text which show good practices.

[38] International Energy Agency (2012) *Monthly Electricity Statistics July 2012*.

8.1. Planning and Permitting Procedure: Overview



8.2. Terminology

Ministry of Petroleum and Energy
Is responsible for the final permitting decision on a project.

The Norwegian Water Resources and Energy Directorate (NVE)
The national regulator who is responsible for assessment of application documents and gives recommendations to government regarding the approval.

White paper
White papers are drawn up when the government wishes to present matters to the national parliament. These documents, and the associated subsequent discussion in the national parliament, often form the basis of a draft resolution or bill at a later stage. In February 2012, the government issued a white paper on infrastructure projects, suggesting a change in the permitting procedure.

8.3. Planning and Approval Process and Interaction with Stakeholders

In February 2012, the Norwegian government issued a white paper suggesting changes in the legislation on infrastructure projects. This white paper will lead to a different formal permitting procedure prescribing a more substantial involvement of stakeholders at an early stage of the process. However, since the paper has not been implemented into law yet, the existing procedure will be described below while pointing out major future changes regarding stakeholder involvement.

8.3.1. Need determination

Every second year, Statnett publishes a grid development plan. Until this year, Statnett did not involve external stakeholders during the development. Nor did it conduct a public consultation. However, the plan was developed in close cooperation with regional grid owners. In 2012, Statnett invited environmental NGOs for the first time to comment on the development plan after its finalisation.

In the summer of 2010, Statnett faced major opposition during the Hardanger project. This led to considerable changes in the approach towards external stakeholders. One major point of criticism from the opposition was the need case. At a late stage in the process – after the formal procedure had been finished, the Ministry for Energy had approved the application, and legal objections had been submitted, the ensuing discussion escalated, and the whole project was questioned. As a consequence, Statnett has started to shift the involvement of stakeholders to an early stage in order to ensure that the need is understood from the beginning of the planning procedure. For this, an internal strategy of the grid development division was developed at the beginning of 2011. The government's white paper reflects the major changes that Statnett now voluntarily pursues and foresees to adopt them into the formal procedure.

Based on the results of the grid development plan, Statnett is assessing the need case internally at

the beginning of a project by evaluating different concepts. In the concept evaluation, which includes different connection points, Statnett assesses e.g. whether the consumption can be altered or reduced or if the production can be moved to another region, so that there is no need for the new lines. Upgrading the existing grid is assessed as well. The white paper from the Norwegian government suggests that the concept evaluation will be assessed by an independent consultancy. Afterwards, the Ministry of Energy has to sign off on the evaluation.

Box 1: Involving stakeholders in concept evaluation

In the new approach started after the Hardanger case, the concept evaluation is discussed with a group of stakeholders, such as local governments, local and regional authorities and environmental NGOs. In these meetings, Statnett tries to identify, which points stakeholders agree upon, or which concept they prefer. The results of the discussion shape the decision on which concept (connection points) is further developed. When going public for the first time, these key stakeholders are already familiar with the project. It is likely that they are helpful in promoting the need case when talking to the public. This is particularly useful if people trust their regional representatives and authorities.

Box 2: New approach in need discussion

In order to meet difficulties around the need discussion they experienced in other projects, Statnett is pursuing a new approach in the Nettplan Stor-Oslo project. This includes Statnett involving external stakeholders early in the need evaluation. In a public event in November 2011, the project was jointly presented by Statnett, the municipality, and Friends of the Earth Norway. The affected municipalities of Oslo and Akershus, other public infrastructure providers, and real estate associations were invited. Topics that were discussed in this event included the overarching challenges in the Norwegian electricity network, the studies Statnett had undertaken so far, and innovative technologies for the energy infrastructure. Besides informing the guests about the project status in different presentations, input was collected in a workshop format and will be considered in the future process.

In a next step, Statnett commissioned an external consultancy to carry out a study on different alternatives to grid expansion. It was published in January 2012, and NGOs were invited to share their opinion on the report. The study assesses to what extent energy efficiency, reorganisation or load management could serve as alternatives to grid expansion. The result is that social costs of energy insecurity have to be weighed against the costs of having unused capacity in times of low energy consumption.

At this point in time, citizens were not involved actively in the process. However, the website provided an overview of the procedure, all documents and presentations of the events, and contact details from the project manager. In September 2012, alternatives were presented to

the broader public. The website makes technical terminology, such as voltage upgrade or security of supply, easy to understand with the help of maps and animations.

Statnett's work towards a communication strategy and stakeholder analysis is also part of the concept evaluation. This includes the development of a stakeholder mapping. Sometimes an external communication consultancy is involved here, but often Statnett conducts the mapping in-house. Among other sources of information, a Geographical Information System is used to identify landowner properties. After a list of stakeholders is established, it is discussed with municipal representatives for verification. The stakeholder list is constantly modified throughout the process.

In general, Statnett notes that renewables provide positive impulses in the need discussion. In particular when cooperating with environmental NGOs, this is a decisive argument. Even though some NGOs still question the need for grids in general, most of their representatives understand the important relation between renewables and grid expansion. To an increasing extent, Statnett shows its support for renewable power production by communicating climate policy. Even though Statnett acknowledges its role in explaining the bigger picture, NGOs point out that Statnett could play a bigger part in the political discussion favouring the connection of renewable energies.

8.3.2. Spatial planning

The concept evaluation is refined into a so-called planning programme, which contains different suggestions for corridors Statnett plans to elaborate on and the scoping document for an EIA. Statnett sends this out to all municipalities that are affected by one of the suggested corridors, local NGOs and authorities. It is also handed in to the NVE, which is conducting a public consultation on it.

Box 3: Public information during spatial planning

At the beginning of the spatial planning phase, Statnett goes public with the project for the first time. For this step, project managers are trained by the communication department on how to address the media. In these training sessions, participants deal with difficult FAQs and prepare on how to best handle angry or emotional citizens.

At this stage in the process, public meetings are organised together with the NVE. Normally, one meeting is arranged per municipality. For this, Statnett sends out direct mailings announcing the meeting together with an information brochure to every household in the possible corridors. The brochure explains the status quo of the planning proposal, contains contact information, and shows when and how people can participate in the planning procedure.

At these meetings, Statnett is represented by the project manager, a project planner, and someone from the local office of Statnett. The latter are normally well-known in the region and thus trusted contact persons for citizens. Statnett notes

that these personal relations help when discussing a concrete project. Whenever citizens stated interest in personal talks or joint field trips in their municipalities, Statnett met these requests. Statnett reports positive experiences in staying extra hours after the events in order to have one-on-one talks with citizens who do not want to pose their questions in a bigger forum.

After the public consultation, Statnett adjusts the planning programme, continues with the evaluation of different options and narrows down its scope on different route options.

8.3.3. Permitting

An integral part of the permitting procedure is the EIA, which is carried out on different route options. A public consultation on the EIA is foreseen and conducted by the regulator. In the application document, Statnett prioritises the different options.

Box 4 – Local office to accompany public consultation on EIA

For the public consultation of the EIA, a second round of public meetings was organised at the Ørskog–Fardal project. Moreover, other stakeholders, like municipalities or NGOs, met for a consultation. At this stage, Statnett opened a local office in a municipality building with opening hours from 12-4pm and 7-10pm or 11pm, so that the working population has a chance to visit. In this office, the local representative of Statnett, and if possible, the project manager are available.

After the EIA and the assessment of the application, the NVE issues a preliminary licence on an exact line, including plans on substations and a rationalisation plan. After the license is published by the NVE, a third round of public meetings takes place in order to inform about the decision and answer questions of the population. Furthermore, field trips together with the Ministry of Energy and Oil are organised on the basis of appeals against the license.

The Ministry of Oil and Energy finally decides on the application after a recommendation from the NVE. Within the suggested process of the white paper, it is the Ministry, which assesses the application and gives a recommendation for the decision. The application will then be approved by the national parliament. With this, the decision shall be put on a broader basis of legitimacy.

Box 5 – Explaining route details via a 3D visualisation

Following the decision of the NVE on the exact line, Statnett developed a 3D visualisation tool used to explain the details of the route to the public. It is used both on the website and during information meetings. Statnett reports very good experiences with this tool, since the line becomes more vivid for the layman. In short video clips, one can "fly" through the region and see the exact pylon design.

8.4. Nature Conservation and Environment

Statnett supports several research and development programmes dealing with the impact of grid lines on the environment. The programme, "Environmental Adaptation of Power Lines", has a special focus on the development of new types of pylons that are adapted to the landscape and natural surroundings. The programme will also study what effects power lines have on flora and fauna. Moreover, Statnett finances independent research, which investigates the effect of power lines on biodiversity. This includes long-term research projects on birds, as well as wild and domesticated reindeer. One of the programmes examines biodiversity in and near power lines by mapping vegetation, insects, birds, and mammals.
When constructing new power lines, Statnett uses techniques such as laser scanning and 3D modelling in the early stages of the planning phase. With this technique, Statnett can adapt construction plans and choose alternatives that take into account the shape and character of the landscape.

8.4.1. Strategic Environmental Assessment

Statnett does not carry out a Strategic Environmental Assessment on the development plan or during the project. NGOs point out that environmental concerns are not part of the development plan. In 2012, NGOs were invited to give their comments on the development plan for the first time. However, the plan was already finalised and NGOs did not see where their comments made any impact. NGOs are of the opinion that the different scenarios, which form the basis of the development plan, should be publicly discussed.

8.4.2. Environmental Impact Assessment

As in most other countries, the EIA is an integral part of the permitting procedure. Statnett consults municipalities before the official scoping and takes their input into account. The EIA is conducted by an external consultancy, which is chosen by an open tender.

Box 6: Field trips and workshops for EIA

For the EIA, numerous field trips are conducted. In workshops with representatives from Statnett and the consultancy, different aspects of the EIA are discussed, such as landscape or tourism, to make sure that every relevant aspect is considered in the studies.
Part of the application documentation is an environmental transport plan. It is monitored by the NVE in the later stages and forms part of the contract Statnett signs with construction companies. The plan is again discussed with municipalities and presented in information meetings to the public.

NGOs state that the data used for the EIA is sometimes not of high quality and out-dated. More field trips, a recurrent inquiry of data, and higher standards (e.g. certain amount of prescribed days spent in the nature) would be necessary to get exact results on the true impact on nature.

Box 7: Possible good practice suggested by Norwegian NGO
One solution could be for the government to develop a centralised database on biodiversity, which could be used in the planning of different sectors. At the moment, there are several different databases in Norway, which are not interlinked. Existing knowledge can thus not be used on every grid project.

8.4.3. Collaboration with environmental NGOs

Statnett maintains a constant dialogue with environmental NGOs, such as WWF Norway or Bellona. However, the exchange has been sporadic and lacks a structured approach or regular meetings that shape decisions.

With the new approach of stakeholder involvement, the role of NGOs in grid expansion projects on the ground becomes more important. In the Nettplan Stor-Oslo project, NGOs were invited to a panel debate about the need case in January 2012. While this early involvement is appreciated by NGOs, they remain critical to the fact that it is not completely clear what Statnett will do with the feedback they receive at this early stage of the process.

8.5. Change Process and Internal Structures

The internal change in the process geared towards improving stakeholder communication and involvement started years ago. This shift was triggered chiefly by the major difficulties that Statnett faced during the Hardanger project. On this occasion, both the grid planning approach and internal structures were changed.

The consideration of communication measures and development of a communication strategy were shifted to a very early stage of the project development. Statnett learned that it had to start off by involving stakeholders in the need decision process. In order to achieve this, Statnett restructured its departments, linking the communication and the grid development departments closer together. The communication department now takes part in all the project meetings from the start of the project.

Box 8: Communications handbook for project managers
Statnett has developed a handbook for project managers who normally lack a background in communication but are nevertheless responsible for the communication of a project. The handbook outlines a communication strategy in support. It contains Statnett's core messages that it seeks to convey (e.g. "Statnett seeks sound climate solutions and paves the way for new renewable energy"), gives an overview of the effects of communication, categorises possible target groups and different channels, and explains how to identify communication opportunities and risks. Core information of the handbook is a list of possible communication measures at every step of the process, such as preparing press releases, drafting letters to local authorities, local press briefings, and media monitoring. Project managers can thus use the handbook as a

reference for every project phase. With the help of concrete examples, different communication measures are moreover explained in greater detail. The handbook is based on established procedures, experiences from project managers, and best practices.

Box 9: Media trainings for project managers

Statnett's communication department realises media trainings for every project manager in which they learn how to deal with different types of media. These sessions prove to be very helpful, since project managers are supported in establishing key messages they can deliver to different audiences. They can also train themselves to keep their language simple and understandable.

Box 10: Internal feedback system for communication strategy

Statnett has developed an internal feedback system for the communication strategy, which helps to ensure that as many aspects as necessary have been considered in the strategy. For this, every project manager has to present its communication strategy to his/her colleagues.

In spring of 2011, the position of stakeholder manager was established. The manager is developing an overall stakeholder strategy for Statnett and advising project managers on how to involve different stakeholder groups in specific projects.

9 The United Kingdom

Transmission System Operator: National Grid
Energy mix: 73.5% Combustible Fuel, 18.9% Nuclear, 5.3% Geoth./Solar/Wind/Other, 2.3% Hydro[39]

Project name: Hinkley Point C Connection
Location: Southwest of England, close to Bristol
Timeframe: 2009 - 2018

Interview partners

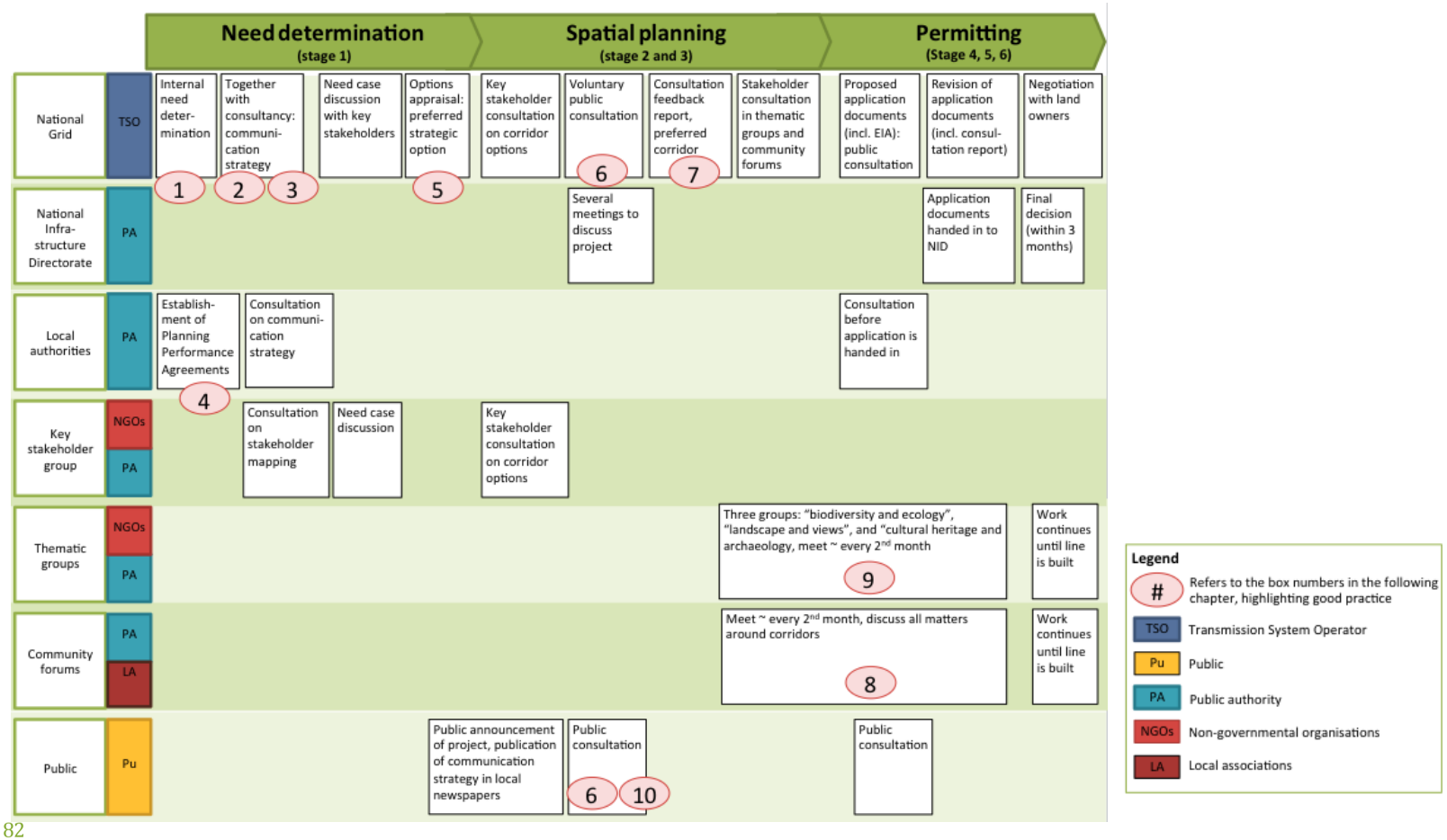
- Julian Buttery, National Grid, UK Community Relations
- Roseanne Battye, National Grid, Community Relations
- Stephen Knight-Gregson, National Grid, Principal Specialist – Major Projects
- Rob Graham, 3G Communications

- Ivan Scrase, RSPB, Senior Climate Change Policy Officer
- Aedán Smith, RSPB, Head of Planning and Development, Scotland

The subsequent chart illustrates the most important steps in the planning and permitting procedure of England and Wales. More details on these process steps are explained in the text below. The highlighted numbers refer to boxes in the text which show good practices. The described procedures do not apply to Scotland.

[39] International Energy Agency (2012) *Monthly Electricity Statistics July 2012*.

9.1. Planning and Permitting Procedure: Overview



9.2. Terminology

Community council/ parish council
The local community representative bodies in Wales (community councils) and England (parish councils); lowest tier of government, elected body.

Community forum
The consultation body for National Grid; participation is restricted to representatives of the community (i.e. resident groups or organisations) plus local authority observers.

Key stakeholders
The group of stakeholders as determined in the Planning Act 2008 and first contact point for National Grid's consultation. Included are: local authorities, Environmental Agency, English Heritage and/or CCW, Natural England and/or Countryside Council for Wales, Marine Management Organisation and/or Welsh Government, Joint Nature Conservation Committee.

Local authorities
The administrative bodies responsible for public services and facilities within a specific area, which includes non-NSIP planning consent requirements. Can be county councils, district councils or unitary authorities, depending on local authority structures in particular areas. They have specific roles under the Planning Act with regard to pre-application consultation.

Planning Act 2008
The legislation introduced in 2008 with the intention to speed up the planning and permitting of major infrastructure projects, including the expansion of the electricity grid. Key elements include an earlier and more extensive consultation of stakeholders and the introduction of a one-stop-shop for permitting, the National Infrastructure Directorate.

Planning Aid
The Planning Aid provides free and independent planning advice to communities and individuals, which cannot afford to pay professional fees, via a number of charitable organisations throughout the UK. Volunteers working for Planning Aid are mainly former or current employees of permitting authorities. Planning Aid takes part in the permitting process by chairing Community Forums.

Planning Inspectorate – National Infrastructure Directorate (NID)
The examining authority for nationally significant infrastructure projects (NSIPs) under the Planning Act 2008. The NID considers the consent application and holds hearings before making a recommendation to the relevant Minister who decides whether to grant consent. For energy projects, the decision-maker is the Secretary of State for Energy and Climate Change.

Planning Performance Agreement (PPA)
The basis of co-operation between National Grid and local authorities. Sets work packages and timetables for the delivery of a planning decision and covers funding of local authorities by the National Grid for agreed tasks.

Thematic group
Groups of professionals and specialists formed to discuss key environmental subject areas – 'landscape and visual', 'biodiversity' and 'historic environment'. The aim of the Thematic Groups is to inform and influence the Environmental Impact Assessment (EIA), which will also influence the design of the connection including mitigation such as access routes and how works are undertaken.

9.3. Planning and Approval Process and Cooperation with Stakeholders

For National Grid, stakeholder involvement is a general principle, which is part of the company's identity in different fields of action, and goes beyond specific grid expansion projects. This includes, for example, a public consultation on its approach to the design and routing of new lines or on its stakeholder, community and amenity policies[40]. National Grid is constantly back-checking its own approach, while building on an internal feedback system, which identifies best practices based on experiences in projects on the ground.

National Grid has developed an approach for the planning and approval of a new transmission line, which covers six different stages. Phases one (Strategic Options) and two (Outline Routing an Siting) cover the pre-application stage. Phases three to six (Detailed Routing and Siting; The Proposed Application; Application for Development Consent; Consideration and Hearing) are part of the official permitting process including the Application for Development Consent, the EIA, and a formal public inquiry. A major part of its planning and consultation process has been shifted to the pre-application period to align with changes to the consenting regime introduced by the Planning Act 2008. This means that the two steps of need determination and spatial planning are already decisive for the interaction with external stakeholders before the permitting procedure.

9.3.1. Need determination

Each year, National Grid issues a Seven Year Statement on the National Electricity Transmission System[41] explaining what generation capacity is currently connected to the network and what it plans to connect to the network.

Box 1: National Grid's new role in explaining energy policy
During recent years, National Grid has perceived a change in its role within the bigger picture of energy policy – independent from specific projects. The company understands that explaining the context and consequences of political decisions is increasingly becoming more its task if it aims to succeed in achieving social acceptance of specific projects. National Grid reported that citizens are only willing to engage and potentially accept the consequences

[40] http://www.nationalgrid.com/NR/rdonlyres/21448661-909B-428D-86F0-2C4B9554C30E/39991/SCADocument6_2_Final_24_2_18.pdf

[41] http://www.nationalgrid.com/uk/Electricity/SYS/

on a local level when they have a better understanding of the bigger picture. The communication of specific projects always starts with explaining the general energy policy. As an example, National Grid adds a short animation to its project websites, which explains where gas and electricity come from and how National Grid sources and delivers energy to homes around the country.

After the need case is established internally, National Grid evaluates what the options are to meet this need. Key stakeholders are consulted. External communication consultancies are employed, which specialise in community and stakeholder relations for infrastructure developers and also develop a communication strategy for the project.

Box 2: Developing a project specific communication strategy

For the Hinkley Point C connection, 3G Communications, a specialist communications consultancy, was appointed by National Grid to provide strategic and practical support during the pre-application consultation process. After an initial briefing, the consultancy developed a detailed communication and consultation strategy. This started with a stakeholder mapping to identify groups either affected or those which have an interest in the project proposals. On the basis of this initial evaluation, communication techniques were identified and implemented to ensure an appropriate level of engagement with each of these groups.

A consultation strategy is prepared at the outset of a project in consultation with relevant local authorities, and a Statement of Community Consultation (SOCC)[42] is required for formal consultation under the Planning Act 2008. The SOCC is published in local and regional newspapers later in the process.

Within National Grid, the different stakeholder categories are managed by various teams throughout the project. Long-term relationships are established since it is the same group of people, who meet on a regular basis over the years.

Box 3: Target group specific stakeholder involvement

As a special feature, the communication agency advises on regional characteristics including target groups with specific requirements. Using input from the local authorities, the consultation strategy also addresses 'hard to reach groups'. This encourages engagement with groups that do not usually participate in this type of exercise. Examples include providing information material in different languages, braille format, or audio versions for the visually impaired. This is in addition to taking events out into the community in order to capture feedback from under-represented groups or areas.

[42] http://www.nationalgrid.com/NR/rdonlyres/E2732FFA-215C-4A43-823E-3E03F740CAF3/41699/HinkleyPointCConnectionSOCCfinalversion081009lowre1.pdf

Box 4: Planning Performance Agreements
In order for local planning authorities to engage effectively in the planning process, the instrument of Planning Performance Agreement (PPA) has been suggested by the government to overcome local authority resource difficulties. They form the basis of cooperation between National Grid and local authorities. Since National Grid's application fee only goes to NID, the PPAs also cover funding of local authorities by National Grid for the work packages set out in the agreement. The funded work force is designed to be task oriented and focuses on the specific tasks required to meet the pre-application consultation obligations of local authorities under the Planning Act. PPAs are not designed to address issues such as community benefits.

With the help of system studies, the next step is to identify the various strategic options, including different technologies and different geographical connection points. National Grid then undertakes an options appraisal with the help of a multi-criteria analysis.

Box 5 – Options appraisal via multi-criteria analysis
Advantages and disadvantages of different technically-feasible options are evaluated. National Grid considers environmental, socio-economic and technical issues alongside capital and lifetime costs. These categories do not have a strict hierarchy. Rather, they are evaluated on a case-by-case basis. The methodology of appraising the various options only supports the decision-making process; it does not replace it. The advantage of the analysis is that it ensures that all relevant aspects are actively being considered.

After the options appraisal, key stakeholders are again consulted on the results of the analysis. Together with their input, National Grid develops a Strategic Options Report containing a preferred strategic option (two points which will be connected). Afterwards, the second stage of the process begins.

9.3.2. Spatial planning

After the preferred strategic option is set, the second stage (Outline Routing and Siting) begins. Studies are carried out in order to identify various corridors and suitable locations for infrastructure, such as sub-stations. After consulting the key stakeholder group, another options appraisal helps in collecting more detailed information on different route corridors.

At this stage, the broader public is involved in the project for the first time through a voluntary (informal) public consultation in order to get feedback on these options.

Box 6 – Reaching out to the public for a consultation on the second round of options appraisal
During the Hinkley Point C connection project, National Grid distributed mailings to households within a consultation zone (1 km of the proposed route corridor options) to raise attention for the public consultation. To avoid the perception of promotional flyers, National Grid printed the project

name on the envelopes together with the National Grid logo. Some 37,000 letters were sent out together with a project summary leaflet.
Drop-in events with exhibitions were organised to inform the public. At each venue, events were held twice so that scheduling difficulties would not prevent people from attending. At these events, National Grid staff was present representing different disciplines including construction, planning, environmental assessment, property, and EMF.
To ensure that the documents, which are needed for the public to participate in the consultation, are accessible for everyone, various formats were chosen: Documents were put on a website, distributed during the drop-in events, and displayed in public libraries together with information posters.
In parallel, project briefing meetings with town and parish councils, local authorities, and with local MPs were conducted. Non-statuary consultants, which had been identified with the help of the key stakeholder group, included environmental and nature conservation NGOs, farmer associations, and business representatives.
Similar to the distribution of the documents, National Grid offered different format options for the submission of comments. These included email, a hardcopy feedback form, an online feedback form, telephone access, and letters. National Grid received over 8,000 pieces of feedback.

Box 7: Responding to the input given by the public
The comments from the public consultation phase were analysed with the help of a stakeholder tracking system. An acknowledgement was sent to all people that provided feedback. Afterwards, the National Grid Communications Team evaluated whether individual answers were needed. All in all, 1,500 tailored responses have been sent out including answers to specific questions and information material developed specifically for this purpose. Addresses have been kept in a database, so that people could be informed in later stages. For the evaluation of the comments, National Grid commissioned an external consultancy, which developed an electronic analysis system. With this, all issues raised were captured, logged and coded into different themes. This system ensures that all concerns are addressed in the later stages of the process.

During the development of the project, National Grid met regularly with NID to discuss the project and the progress of the consultations. After the meeting, National Grid drafted a 450-page Consultation Feedback Report [43] in which the comments they received are summarised, while also showing how National Grid did or will respond.
Results of the consultations together with the studies carried out are used to identify the preferred route

[43] http://www.nationalgrid.com/NR/rdonlyres/5C64B9AB-9A5F-4ECE-AFDB-63B2E7D2F2C0/49284/Consultation_Feedback_Report_WebVersion_Aug_2011_FINAL.pdf

corridor. Once the preferred route corridor is determined, the second stage of the process is finished. In the third stage (Detailed Routing and Siting), more detailed surveys are undertaken to establish whether the route corridor should be predominantly overhead or underground, while the precise alignment is also closely examined. At this phase, stakeholder consultation is organised in both Community Forums and Thematic Groups.

Box 8: Community Forums
Community Forums are divided into two types: One Strategic Community Forum (SCF) deals with all matters that affect the route corridor. The SCF includes representatives from affected local authorities, parish councils, interest groups and resident associations. It meets roughly on a quarterly basis. The second type consists of Local Community Forums (LCF), which focus on local issues relevant to specific communities along the length of the proposed route corridor.
Participants agree on Terms of Reference, membership criteria and other relevant operational matters. In order to be eligible for either the SCF or LCF, members need to be genuine representatives of local groups or organisations of more than five individuals. Everyone can apply for membership to a forum. Community Forum meetings are held throughout the course of the project, including both the planning and the construction phases.
During the session, different formats are used, such as round table discussions or break out groups; however, an independent strategic chair is present at each meeting, who has been appointed through Planning Aid (see 9.2.).

Box 9: Thematic Groups
In addition to Community Forums, National Grid has developed three different thematic groups for "biodiversity and ecology", "landscape and views", and "cultural heritage and archaeology". In these groups and at earlier project stages, NGOs are involved along with statutory agencies, such as environmental authorities. The groups advise National Grid e.g. in relation to collecting information on the Environmental Impact Assessment.

Box 10: Providing understandable and comprehensive information
National Grid is committed to providing comprehensive communication materials throughout the process. When designing materials, they follow a multi-layered approach. This allows for the creation of materials ranging from easily digestible summary information to more detailed or targeted pieces. This means that for every demand, a suitable format of material is available. For instance, if someone wants to get a short overview on a topic, she/he can take a look at a factsheet. For a more detailed understanding, brochures explaining the background can be read. However, if someone wants to get all available information and "dig deep" into a topic, comprehensive reports e.g. on consultation measures or minutes of all stakeholder meetings, are easily accessible on the website.

The set of material produced for grid expansion projects contains a document explaining National Grid's decision making approach as well as project specific material explaining the exact route or a project newspaper informing about current activities. The material produced for the public is written in plain English without technical terminology, but more technical information is also available if requested. The communication consultancy and National Grid have established a system of review for all materials. Citizens not involved in the project test materials for their comprehensibility. Moreover, local authorities, which cooperate with National Grid in the framework of a Planning Performance Agreement, check the documents before their publication.

After deciding on a preferred route alignment, an Environmental Impact Assessment is carried out. The results are part of the proposed application document, and stage four of the process (The Proposed Application) begins.

9.3.3. Permitting

The Planning Act of 2008 prescribes a mandatory public consultation on the proposed application, after which National Grid reviews its proposals and changes it where appropriate according to the feedback. The Consultation Report on the results is part of the application documents handed over to NID. Local Planning Authorities are consulted before the submission as well, and National Grid strives to agree on Statements of Common Ground with those bodies. NID has to provide a recommendation to the Secretary of State. Thereafter, the Secretary of State has to decide whether to grant consent.

Box 11: Dealing with EMF

National Grid has developed a set of measures to address the fear of EMF. In 2004, National Grid initiated a stakeholder advisory group on Electromagnetic fields (SAGE), which was later adopted by the Department of Health in order to provide advice to the government. It is funded equally by the electricity industry, the British Government, and the Children with Leukemia charity group.

This stakeholder group is not a formally constituted body, but rather a dialogue process, which involves key stakeholders on the topic of EMF. This has included a mix of industry, national government departments, regulators and advisory bodies, academics, individuals, and local and national campaign groups.

SAGE's First Interim Assessment was published in April 2007. It considers, amongst others, possible precautionary measures for EMFs from power lines. The work of SAGE led to more discourse based on the inclusion of different stakeholders. With the government's response, National Grid has a legitimate basis to refer to during specific projects.

To inform the public on the different aspects of the EMF discussion, a website has been established by National Grid.[44] On this website, details of EMF are explained, international and UK recommendations and regulations are laid out, and contact details

[44] http://www.emfs.info/

(email and toll-free telephone number specifically for the purpose of EMF) are published. Moreover, the current status of research on different aspects is set out, including abstracts to studies concerning childhood leukaemia and other diseases.
National Grid developed several publications, which provide information on EMF in different formats. For a short overview, a factsheet on EMF is included on every website and available at information events. To get a more in-depth understanding of current research findings, National Grid has established a specialist EMF unit to answer questions via telephone or email. The unit also advises specific project teams. Staff members have a scientific background and support the project team with information events or publications.

Box 12: Dealing with underground cables
In 2011, National Grid commissioned a report from the independent research institute IET (Institution of Energy and Technology). The report analyses the lifetime costs of installing and maintaining different high voltage electricity transmission connection options - for example, overhead lines, underground cables and subsea high voltage direct current (HVDC). The report comes to the conclusion that there are significant cost differences between the available options.
In 2010/11, National Grid carried out a public consultation on a new approach to undergrounding. After producing a draft of the approach, National Grid asked people for their views on the document and revised it according to the feedback received. For the consultation, National Grid informed the public via media, set up a consultation website and online questionnaire, organised five workshops (each with some 20 participants), and held a number of individual meetings with interested parties. The findings of this consultation are published in a consultation report on National Grid's website. The final approach is published in a brochure and on a factsheet. National Grid considers every case for using underground cables on its own merits. In view of the additional costs, undergrounding will only be a solution in very restricted circumstances. They are considered in exceptionally constrained urban and rural areas or for major river crossings.

9.4. Nature Conservation and Environment

As a consequence of the 2008 Planning Act, the British government published National Policy Statements, which provide a blueprint for decision-making on project applications and serve as administrative guidance for the permitting authority. Before the Statements came into force, they were subjected to a public consultation, including the publication of an Appraisal of Sustainability.

National Grid itself does not conduct an SEA on any of its individual project proposals, which are subject to an EIA. The company's Seven Year Statement is not a 'plan' or

'programme' within the SEA definition.

9.4.1. Environmental Impact Assessment

The Environmental Impact Assessment is a formal requirement of each project application. National Grid conducts the EIA as soon as it has determined the preferred route alignment (end of stage three of the routing approach). However, environmental surveys and their analysis, related to the impact which different options have on the environment, play an important role from the very beginning. As part of the options appraisal method, environmental aspects are considered when narrowing down preferences of connection points, corridors, and route alignments. The range of issues and topics to be investigated in studies is discussed continuously in the key stakeholder group.

The environmental studies both for the options appraisal and for the official EIA are carried out by an external environmental consultancy. Before conducting the EIA, a Preliminary Environmental Information Report (PEIR) is drafted. This is part of the documentation available to view for consultation on the proposed application.
On each project website, National Grid publishes a factsheet which explains what the EIA is and how National Grid is conducting it. The company also provides in its relevant reports information about environmental and socio-economic considerations taken into account.

9.4.2. Collaboration with environmental NGOs

National Grid holds regular generic meetings with a number of NGOs, such as Campaign for the Preservation of Rural England and Campaign for the National Parks. It collaborates with others, for example, with the RSPB on a bird monitoring project.

As part of National Grid's acceptance plan, meetings with the WWF and Greenpeace have been organised to discuss options for a continuous cooperation. Concrete decisions on the shape of the cooperation have not been made yet.

National Grid has also recently started a forum where NGOs, government, business representatives, National Grid and the energy regulator can meet up and discuss energy challenge issues – support is limited to providing the participating organisations logistical support to meet up, such as giving access to a venue.

9.5. Change Process and Internal Structures

The Planning Act, which the government passed in 2008, can be seen as a driver for National Grid to restructure its approach internally. During the planning and discussion of the new legislation in 2008, National Grid started to plan how this would affect its approach and how the expected act could be implemented internally. A Planning Reform Implementation Group was established, run by the senior manager in business, who involved all relevant departments. The group was the starting point for National Grid's approach to surpass the

standards set in the Planning Act of 2008. Four years after the Act was passed, the Group is still in place to regularly discuss lessons learned from projects and adjust National Grid's approaches accordingly.

In general, internal cooperation was strengthened as a consequence of the new approach set out in the Planning Act. For example, two groups are now dealing with the issue of public acceptance both on a management and working level:

First, a major project board has been established. This is chaired by the executive director of National Grid's board and includes all the relevant heads of the departments and project managers. This group oversees external developments, such as new legislation, current media discussions or reactions to specific projects.

Second, a weekly working group has been formed to further develop National Grid's approach to achieve public acceptance. It also consists of representatives from all departments mainly involving employees from the more operative level, which have to deal with acceptance issues "on the ground".
To spread the new approach internally, a series of training sessions was organised between May and October 2011.

In general, National Grid learned that its efforts will only pay off if the internal cooperation is on-going. With a feedback system, which ensures the flow of information between people working on the ground and strategic decision-makers, National Grid is identifying best practices and drawing conclusions for future projects. National Grid's approach is constantly being redefined and further developed.

10 Lessons Learned

10.1. Planning and Approval Process and Interaction with Stakeholders

In virtually every country, TSOs have started to go beyond the legal requirements concerning stakeholder involvement.

The success of stakeholders' involvement depends on numerous factors. A precondition for suitable involvement is an extremely specific analysis of the regional situation. Measures are not universal. Rather, they have to be shaped on a case-by-case basis. There are, however, principles that need to be the basis of action in order to have a chance to achieve acceptance. These principles include:

Need determination

With respect to the need determination, it is essential to ensure that civil society groups are informed and given the opportunity to contribute, i.e. ask questions and give input with the aim of reaching a broad consensus in society on the magnitude of the new grid infrastructure needed. If such a societal agreement can be reached, this paves the way in justifying the need of a single power line. Thus, discussions on need with a multi-faceted stakeholder group tend to reduce late-stage conflicts.

Each actor involved in the process needs to fulfil their role in order to achieve a broad acceptance for both general grid expansion or for a specific line. It can help if politicians answer the "why" questions about new grids, so that TSOs can focus on the "how" issues and the technical requirements of a specific project. This is their core competence.

It is, however, not enough for TSOs to restrict their efforts to technical grid planning. Even if politicians and authorities have the final responsibility, TSOs will be unable to avoid explaining the bigger picture of an energy system and its relation to the need for grids themselves. In some countries, there is solid evidence that it helps the overall discussions when politicians, permitting authorities, and civil society organisations take their responsibilities seriously. This applies to producing information material, providing information on a website, or by simply being accountable in information meetings. If TSOs and NGOs participate in the public discussions, it is important to clarify their respective roles and duties for the

public. Only if people know who is responsible for which action, can they know whom to approach with their concerns.

Examples illustrating these lessons:
- 50Hertz publishes load flow data online to show the need for grids (Germany Box 4, p.43)
- RTE is developing a computer game to increase understanding of the need for grids (France Box 3, p.32)

Especially NGOs can play an important role here, not only in actively contributing in the discussions about the need determination, but also in explaining the discussion outcomes to the population at a later stage if they are convinced. If environmental NGOs support a specific grid project on the basis that it is a necessary building block for more renewable energy, they may be well placed and willing to play a key role on several tasks. These include explaining the overarching story of climate change, the goal of curbing CO2 emissions, and the need for grids to a sceptical public. However, it is obvious that this support will not be granted if NGOs are not convinced of the need for a specific project and its environmental benefits or acceptability. In this respect, it is essential that governments provide a policy framework and clear energy targets that allow TSOs to plan grids that meet the expectations of society.

Example illustrating this lesson:
- DUH plays an active role by organising information events for the public (Germany Box 8, p.45)

Early stakeholder engagement

Early and proactive information and involvement of stakeholders help in smoothing planning and approval processes for various reasons. TSOs, politicians or planning authorities, which actively provide information early in the process, can prevent the negative impression that a planning and permitting process is being "hidden" from the public. Furthermore, well-structured communication combined with the active provision of information can mitigate the potential for rumours or misinformed negative sentiment. Experience shows it is advantageous to provide information before someone asks for it. This strategy allows for active measures instead of reactive countervailing of accusations. Finally, a systematic consultation of relevant stakeholders from an early stage is the prerequisite to learning and appropriately dealing with specific and sensitive local issues. By gaining local knowledge, joint solutions to specific problems can be worked out.

Example illustrating this lesson:
- Statnett is holding local stakeholder conferences at the beginning of the spatial planning (Norway Box 3, p.76)

All interviewed TSOs agree that a detailed stakeholder mapping at the beginning of the process is the basis for their strategic involvement. Consulting a group of previously identified stakeholders on the mapping itself can substantially improve its value to the overall process.

Example illustrating this lesson:
- RTE is using multiple sources for their stakeholder mapping (France Box 2, p.32)
- 50Hertz is gathering regional knowledge, e.g. with surveys (Germany Box 7, p.45)

Given their low level of expertise, it is particularly beneficial to clearly inform the public about consultations and information events to spur their full participation. Furthermore, information essential to substantial public input needs to be shared. Traditional means of communication about public consultation (such as community blackboards) have proven to be insufficient to raise public attention at the early stages. TSOs are, therefore, testing more proactive forms to approach the public and trigger attention.

In many cases, positive experiences have been made by involving local stakeholders before the overall public. In this manner, information specific to the region can be gathered. Also, support of vital opinion leaders, such as mayors or local council members, can be won. This includes guidance on how to best approach the general public itself. At the same time, the early involvement of local environmental groups or local NGOs helps in avoiding discussions occurring behind closed doors, which can burden public impressions. When going public with the project, these stakeholders can likewise assist TSOs and planning authorities in explaining the project. The timespan that passes between approaching authorities and the general public should be short to avoid the aforementioned impressions of "behind the scenes" activities or the spreading of rumours.

Example illustrating this lesson:
- National Grid is giving targeted information to 'hard to reach groups', e.g. in minority languages and in Braille (UK Box 3, p.85)

A consultation on issues, such as defining a corridor, a route or technical solutions, has to take place before major decisions are finalised. Moreover, a continuous dialogue with permitting and local environmental authorities, NGOs, and, ideally, with the public helps in the development of a strong application for a new line. This is due to the fact that their concerns can already be addressed when conducting studies and prioritising route options. Sufficient time also needs to be granted so that reasonable alternatives proposed can be taken duly into consideration. This implies that consultations often have to be initiated prior to the official planning procedures.

Example illustrating this lesson:
- TenneT is proactively cooperating with local authorities to plan information provision (Netherlands Box 1, p.65)

Also a tiered approach reflecting the different state levels can be useful. TSOs note positive results when establishing general planning principles together with national authorities and then cooperating on their implementation with regional and local authorities. This structure allows local issues to be taken into account. To realise these discussions on a regular basis, more

standardised forms of cooperation can be helpful, e.g. in round tables or with cooperation agreements.

Example illustrating this lesson:
- Terna is conducting regional Round Table consultations throughout the spatial planning process (Italy Box 1 and 2, p.55-56)

Transparent process and decision

Even though spatial planning and permitting processes are standardised and regulated, participants cannot assume when a project is announced that stakeholders are familiar with the different procedural steps or their options for getting involved. Moreover, it is essential for someone to thoroughly explain the process and to convince the public, that their strong participation is a serious part of the process. The early and constant flow of information on the steps ahead is thus instrumental in reassuring the public that their input matters. It also establishes the basis for their contribution. Process information should cover the legally relevant consultation phases, topics to be discussed, the timeframe for major decisions, decision-making principles, and guidance on how public input will be used.

One solution can be an in-depth illustration of the individual process steps repeatedly outlined and explained in all information material. Following clear steps and making sure that everyone interested is involved in the relevant decision-making process is beneficial in resolving questions that may arise later on project decisions. Furthermore, TSOs report that clear communication from authority representatives in explaining the legal process is effective in overcoming conjecture that TSOs are "hiding behind" legal process rules.

During disputes, arguments should be clear and consistent. Conversely, inconsistent and wavering arguments fuel public distrust and opposition. The basis for decisions and their influencing factors should be transparent, so that people can easily understand why certain decisions have been taken. Additionally, conflicts can be reduced by official and easy-to-understand documentation, which plainly illustrates rules, criteria and principles that guide decision-making.

Examples illustrating this lesson:
- National Grid is providing options appraisals via multi-criteria analyses (UK Box 5, p.86)
- Terna's siting decisions are supported by transparent data analysis (Italy Box 6, p.58)

When involving stakeholders in the decision-making process, one of the core factors is to show how their input was taken into consideration. A report, showing feedback and the direct link to changes in the planning can be useful. This may include clarification as to why certain public arguments were not considered. At the same time, this can underscore the perception that their input was taken seriously. Experience has shown the public is more willing to support final decisions, when they feel their input has been instrumental to the process. It is thus advantageous to disclose the results of negotiations and discussions with different

stakeholder groups in some form of information material.

Providing credible and understandable information

Some TSOs claim that one can never publish too much information. However, the format in which information is published plays a major role in achieving acceptance. While it is important to provide the full application documents, which may consist of hundreds or even thousands of pages, an executive summary that explains the most important factors may be required. Clearly, some target groups need and expect technical and detailed information to feel they are adequately involved. Meanwhile, others feel that if documents are not translated into a simple language, which can be understood by a layman, that this is a sign that TSOs or other authorities are uncooperative.

Examples illustrating this lesson:

- RTE pays for information material also for opposing groups to ensure different views are distributed (France Box 4, p.32)
- TenneT and Statnett are using 3D visualisation tool to make spatial planning understandable to the public (TenneT: Netherlands Box 7, p.69; Statnett: Norway Box 5, p.77)
- RTE, National Grid and 50Hertz are providing transparent information on EMF (RTE: France Box 11, p.35; 50Hertz: Germany Box 16, p.49; National Grid: UK Box 11, p. 89)
- National Grid are using "layered information" approach (different formats for each piece of information) and providing multiple channels for feedback (UK Box 6, p.86)
- Statnett opens local office in municipality building (Norway Box 4, p.76)

Active provision of data, especially regarding critical topics, is a further point that can determine whether the public feels it is being taken seriously or not. To remain silent about critical topics can easily create the notion that there was an intention to avoid discussions with the public.

Since the independence of information is questioned at times, references to non-TSO sources can help establish a common ground of understanding. Even if these other sources are not in line with TSO opinion, it can illustrate that TSOs have considered a variety of viewpoints. These may include studies from scientific institutions or NGOs. A solution, which takes multiple perspectives into account, increases the chance for public acceptance.

Examples illustrating this lesson:

- 50Hertz held an information meeting together with Ministry of Economics and a local campaign group (Germany Box 15, p.48)
- TenneT used external technical expertise to determine feasibility of undergrounding (Netherlands Box 9, p.69)

The media plays an important role in shaping the opinion of a major audience. While it is obviously impossible to avoid critical voices from the media, it is essential to provide interested journalists the relevant information regarding the ongoing procedures and the status of decisions.

Creating appropriate forums for discussion and collaboration

In the past, most TSOs determined routes and corridors internally without substantially involving external parties. However, when applying a more open approach to grid planning, TSOs have found that the specific local knowledge of stakeholders can be beneficial in determining better solutions. This refers both to fact-based matters, such as local environmental aspects, and to values and concerns shared by people in a specific region. Particularly interest groups, e.g. in the field of environment, cultural heritage or landscape, are key to the research process. In order to exchange information, regular meetings with working groups established for this purpose can help in joint discussions on the planning specifics.

The assessment of new technologies and approaches to grid development and maintenance can be helpful in a number of ways. For instance, this can further demonstrate to stakeholders that the TSO has given all viewpoints serious consideration. Topics can range from environmental concerns to EMF and the possibilities of undergrounding.

Examples illustrating this lesson:

- Elia and RTE are restoring biodiversity and minimising grid management cost in Life+ project (Belgium Box 8, p.28)
- RTE is actively managing load consumption to soften peaks (France Box 5, p.33)
- 50Hertz is restoring natural habitat through lake creation in Siebendörfer Moor (Germany Box 21, p.51)
- TenneT has developed a new pylon design to minimise EMF and negative aesthetic impacts (Netherlands Box 2, p.66)

Benefit sharing and compensation

Compensation can have a positive impact on public acceptance. However, the risk is high that people may feel there is an intention to "bribe" them if money or compensation measures are offered in the wrong way. A set of clearly communicated and pre-determined rules can serve as the basis for acceptable compensation.

Experiences drawn from other major infrastructure projects, however, suggest that tangible benefits from the project have greater value than compensation designed to mitigate losses suffered. For instance, acceptance for wind-parks was often successfully increased once people were invited to invest in the parks. There is also less opposition to highways when they substantially improve mobility for the affected population. Major industrial sites can be welcome if tax benefits boost an affected municipality. However, gathering experiences on the potential benefits of transmission lines is still in the initial stages. It is premature to draw conclusions on the optimal compensation package, since the investment profile of transmission lines is quite different than that of a locally owned wind park, for example.

Examples illustrating this lesson:

- Together with government official and local authorities, RTE draws up a Project Accompanying Plan (PAP)

for compensation measures (France Box 10, p.35)
- Together with local authorities, Terna settles compensation measures (Italy Box 4, p.57)
- Together with the government, TenneT agreed to offer buying any house that is affected by 0,4 microtesla or more due to new grids (Netherlands Box 8, p.69)

10.2. Nature Conservation and Environment

Strategic Environmental Assessments (SEAs) and Environmental Impact Assessments (EIAs)

High quality environmental assessments (SEAs and EIAs) often result when clear legislation and rules are in place, which guide for the implementation of the EU Directives [45] on a national level. Authorities play a decisive role in ensuring a thorough application of these rules.

SEAs have a positive impact on the overall planning of grids since environmental issues are considered at the early planning stages, while synergistic impacts can be investigated and technological alternatives can also be weighed. A proper debate in the beginning minimises the need for one at a later stage. Moreover, the reason for an SEA in the first place is to spark a debate on a national level. The specifics of this analysis can depend on national circumstances and do not necessarily have to be a formal SEA.

An early discussion of the scope and methodology can be of benefit both to the working relationships with stakeholders and to high quality assessments. Identifying and addressing environmental concerns together with stakeholders prior to the official permitting procedure can reduce delays later in the process. This can also foster trust among all participants. Additionally, involving local NGOs at an early stage of EIAs can aid in compiling regional information and thus contribute to defining the scope of the assessment.

Even though SEAs and EIAs are mostly conducted by external consultants, it is the responsibility of TSOs to ensure their high quality. Some TSOs have developed guidelines to ensure consistent application of the regulations, while others have introduced an acknowledgement system for the selection of consultancy firms.

Availability of environmental data

The standard of available environmental data can differ significantly from country to country. Some examples show that a problem, such as the lack of data, can even be turned into a strength during the planning process of a new line. The collection of environmental data can promote cooperation with authorities and NGOs, if TSOs are willing to invest time and resources into environmental concerns. However, there should ideally be detailed environmental data (mainly via cartographic material on different matters) available. This can then be expanded upon in studies or

[45] EIA: Directive 2011/92/EU (http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:026:0001:0021:EN:PDF); SEA: Directive 2001/42/EC (http://www.central2013.eu/fileadmin/user_upload/Downloads/Document_Centre/OP_Resources/04_SEA_directive_2001_42_EC.pdf)

investigative exercises in collaboration with local experts.

Example illustrating this lesson:
- Terna established an extensive cartographical database and keeps it updated (Italy Box 6, p.58)

Continuous cooperation with environmental NGOs

Concerning the cooperation between TSOs and NGOs, a structured approach can help both groups in justifying the cooperation internally. Some NGOs found it very useful to agree on a working plan for the joint activities envisioned at the beginning of each year. Achievements are then to be monitored through the help of an activity report. Joint publications can also highlight a cooperation's success and help strengthen good relations.

Examples illustrating this lesson:
- 50Hertz invited environmental NGOs and other stakeholders to field trips to show their new approaches to grid management (Germany Box 20, p.50)
- Terna informs local WWF groups about the current status of grid projects through the national WWF office (Italy Box 9, p.60)
- TenneT approaches environmental NGOs for input in the very beginning of the EIA process (Germany Box 18, p.50)

Here too, conducting common studies is helpful in the production of high quality information and promoting cooperation with NGOs. When cooperating with NGOs it is very important for TSOs to be fully transparent with regards to the internal mechanisms behind their grid planning process. This in turn gives NGOs the ability to evaluate this process or suggest improvements.

10.3. Change Process and Internal Structures

New approaches in involving external stakeholder groups and placing a stronger focus on environmental considerations should be reflected in organisational structures and company cultures.

It can be useful to employ in-house expertise for successful environmental planning. Although environmental planning is normally outsourced by TSOs, some companies hire environmental specialists, who can help prioritise and incorporate environmental issues into internal spatial planning. At the same time, internal expertise ensures input and arguments provided by environmental groups can be appropriately addressed internally.

Example illustrating this lesson:
- Terna hired a new generation of employees with environmental background (Italy Box 10, p.61)

Similarly, hiring experts with a background in stakeholder engagement and dialogue adds value to the staff in several key areas. These specialists can be an asset in determining new approaches to need development, spatial planning and permitting processes.

It is, however, insufficient for TSOs to merely allocate additional resources and time to stakeholder engagement. Rather there needs to be a shift in the mind-set of the other

relevant employees to allow environmental or participation experts to apply their skillsets with maximum effect.

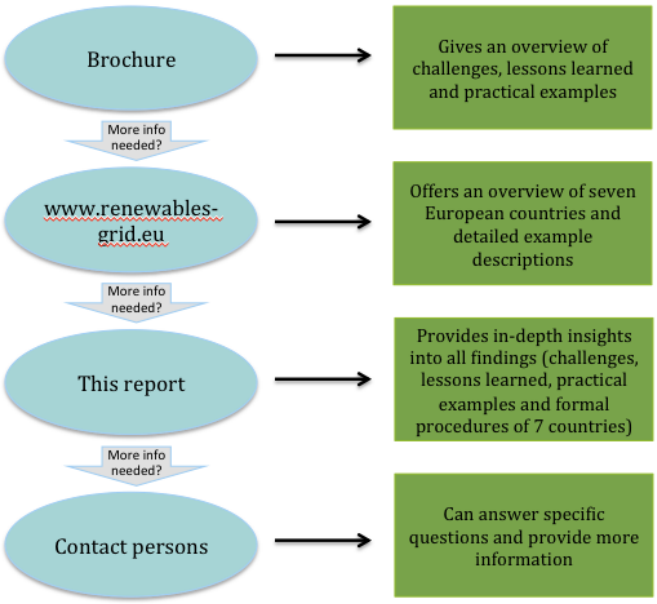
Adjustments in organisational structures can support this process. By merging departments or units closely together, new approaches can be implemented easier. Ensuring stakeholder cooperation and the consideration of environmental concerns throughout the process is more feasible if responsible employees accompany the project from the beginning until the end.
procedures.

While there is a clear shift in the cultures of all participating TSOs underway, experience shows such changes are demanding and take time in order to build a consistent and comprehensive culture focused on transparency and external stakeholder involvement. Internal communication measures or workshops can play an important role. They should not only encompass the need for new approaches but also leverage success stories that illustrate the effect of new procedures.

11 Conclusion

The project on best practices in 2012 has shown that TSO partners of RGI have started introducing new approaches that follow the principles of both parts of the European Grid Declaration. However, many TSOs are only at the beginning of reshaping planning procedures, introducing new methods to reduce impacts on the environment and to engage external stakeholders consistently throughout the process. The need for, and the value of, further knowledge exchange among TSOs and with NGOs has become evident. Workshops held during the project have already started to enhance the exchange of experiences between RGI partners. This effort will continue. Organisations who want to participate in the exchange are very welcome to contact us by emailing theresa@renewables-grid.eu.

Different information formats showing the results of our projects are available:



12 Annex

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- Renewables-Grid-Initiative (2011) *European Grid Declaration*. Available at http://renewables-grid.eu/documents/eu-grid-declaration.html
- Roland Berger Strategy Consultants (2011) *Permitting procedures for energy infrastructure projects in the EU: evaluation and legal recommendations.* Available at http://ec.europa.eu/energy/infrastructure/studies/doc/2011_ten_e_permitting_report.pdf
- RTE (2012) *Au-Delà Des Lignes*. Available at http://www.audeladeslignes.com/#
- RTE (2012) *Eco Watt Bretagne*. Available at http://www.ecowatt-bretagne.fr/
- RTE (2012) *Eco Watt Provence Azur*. Available at http://www.ecowatt-provence-azur.fr/
- RTE (2012) *Facebook: RTE France*. Available at http://www.facebook.com/rte.france
- RTE (2012) *La Clef des Champs*. Available at http://www.clefdeschamps.info
- RTE (2012) *Twitter: RTE Cotentin Maine*. Available at http://twitter.com/cotentin_maine
- RTE (2012) *Twitter: RTE France*. Available at http://twitter.com/rte_france
- Windtest Kaiser-Wilhelm-Koog GmbH, Windpotenzialstudie Schleswig-Holstein, more information: http://www.schleswig-holstein.de/MWV/DE/Startseite/downloads/111005_Netzentwicklungsinitiative_SH__blob=publicationFile.pdf

Project websites

- Stevin (Elia): http://www.elia.be/en/projects/grid-projects/stevin
- Cotentin-Maine (RTE): http://www.cotentin-maine.com/
- Uckermarkleitung (50Hertz): http://www.50hertz.com/cps/rde/xchg/trm_de/hs.xsl/1601.htm?rdeLocaleAttr=de&rdeCOQ=SID-973CEF72-701F306C
- Westküstenleitung (TenneT DE) : http://www.tennettso.de/site/netzausbau/de/onshore-projekte/westkustenleitung/netzausbau-schleswig-holstein
- Ørskog-Fardal (Statnett): http://www.statnett.no/no/Prosjekter/Orskog-Fardal/3D-Visualisering/
- Nettlan Stor-Oslo (Statnett): http://storoslo.statnett.no/
- Randstad380KV (TenneT NL): http://www.randstad380kv.nl/
- Hinkley Point C Connection (National Grid): http://www.hinkleyconnection.co.uk/

12.2. Annex II – Questionnaires

NGO Questionnaire

Organization:	
Date:	
Contact person:	

Part I: Introduction

- Introduction RGI, project on best practices
- Introduction NGO and participants (incl. exact position)

Part II: Overview over the process

- At which points in the process are NGOs involved?
- Is this involvement voluntary or obligatory by state?
- What should be changed regarding the process?
- Should steps be added or changed?

- How do you evaluate TSO's activities concerning EMF?
- How do you evaluate TSO's activities concerning underground cables?

Part III: Involvement of NGOs

- What are the main challenges for NGOs concerning grid development in your country?
- What is most urgent to change?
- What are key success factors?
- What are key barriers for the involvement of NGOs? At which process step do they occur?
- What has changed in TSO's behaviour recently?
- What has changed in your behaviour?

- Early involvement
  - Are NGOs actively informed about process steps?
  - Are NGOs invited to participate from early stage?
- Transparent process and decisions
  - Did TSO clearly communicate the process and criteria to determine corridor and route?
  - Are the final decisions and its determining factors transparent?
  - Is there a clear communication how input from NGOs has been considered?
- Negotiation and compromise to determine final solutions
  - Are alternatives suggested by NGOs thoroughly considered?
  - Are both NGOs and TSOs willing to compromise to find acceptable solutions?
- On-going dialogue and consistency
  - Is there an on-going, professionally facilitated dialogue process?

  - Are messages consistent?
  - Is there a designated contact person available?
- Access to credible, understandable information
  - Is the information available in an understandable detail and format?
  - Are studies commissioned by Statnett available?
  - Are relevant studies/information from "neutral" sources available?
- Do you have common projects with TSO?
- Is there an institutionalised cooperation between NGO and TSO?

Cooperation with affected population

- How do you cooperate locally?
- How would you describe your role in relation to the affected population?

Cooperation with authorities

- How do you cooperate with authorities?
- How are you involved, by law or voluntarily?

Part IV: Transferability (focus authorities, regulators)

- Are challenges/ possible solutions bound to your country? Which? Why?
- What is the regulator's role to implement the solution (e.g. cost acceptance of specific tasks)?
- Which parts of the legislation in your country should be transferred to other countries?

Part V: Next steps of Best Practice work

- Which problems/ approaches to new solutions would you like to discuss with other TSOs/ NGOs during future mini workshops?
- Are there new approaches that you are developing currently/ that you have developed recently? Which problems do you want to solve with these approaches? How?

TSO Questionnaire

Company:	
Date:	
Contact person:	

Part I: Introduction

- Introduction RGI, project on best practices
- Introduction participants (exact position at TSO)
- Name of the project, location and date including duration of the entire process from planning to realisation (ideally nice picture)
- Are there images and documents related to this project?
- Why did you choose this case?

Part II: Overview over the process

- What is done, when?
  - Need definition
  - Spatial Planning
  - Permitting
  - Voluntary or obligatory by state regulation?
- Who is responsible for each action, who is consulted?
  - What's the set up of a project team?
  - Who at TSO does what (different departments, people)?
- At what stage of the grid-development process did a problem occur?
  - When did citizen action groups form?
  - When did you face public/political opposition?
- Are there new kind of solutions applied? New technology? New "pilot"-laws? New processes? …

- How do you cope with the issue of EMF?
- How is compensation handled? Regulation? Who is involved in negotiations?
- Is there any regulation on underground cables? What are criteria applied?

Part III: Environmental impacts

- What is done to avoid/ minimise environmental impacts?
- How do you conduct the SEA? Who is involved? When? External consultancy? NGOs involved?
- How do you conduct the EIA? Who is involved? When?
- Do you have environmental guidelines for external service provider (e.g. construction companies)?

Part IV: Involvement of stakeholders

- How did you choose and approach stakeholders involved? (Format, topics of consultation)?
- Do you conduct a stakeholder mapping?

- Is there any difference in the cooperation with these three stakeholder groups: affected population, environmental NGOs, local authorities?
- Do you have an overall strategy for the cooperation with stakeholders? Do you monitor the activities (e.g. activity report)? Do you have a communication strategy for each project?

- How did you cooperate with environmental **NGOS/ affected population/ local authorities**?
  - What forms of debates or discussions?
  - Was a mediator involved?
  - How did you provide information? Do you have target specific information?
  - How did results of debates/ discussions influence decisions?
  - Did you provide transparent information about the process steps and involvements of stakeholder groups?
  - Did you involve stakeholders for gathering specific environmental and cultural information of the region?
- What was the reaction of stakeholders and follow-up interactions?
- In your opinion: what were key success factors?
- What were key barriers for the involvement of stakeholders? When did they occur?
- In your opinion: what were factors, which led to delay?
- Are there parts of a problem you could not solve? Which?
- What has changed in your behaviours and in the behaviour of your stakeholders?
- What did not work as planned, why? What would you do differently with the knowledge you have today?

Part V: TSO internal

- Did you change your approach internally recently? Why and how?
- What kind of experiences with internal company culture?
- Has the set up of a project team changed over years?
- What is done to train employees (concerning environment and acceptance concerns)?
- What do you do in general to improve the credibility of TSO's actions?

Part IV: Transferability (focus authorities, regulators)

- Did you have difficulties with **permitting authorities**?
- What went well regarding the cooperation with authorities?
- Are lessons learned bound to this specific case? Which? Why?
- What is the **regulator's** role to implement the solution (e.g. cost acceptance of specific tasks)?
- Which parts of the legislation in your country should be transferred to other countries?

Part V: Next steps of Best Practice work

- Which problems/ approaches to new solutions would you like to discuss with other TSOs/ NGOs during future mini workshops?

12.3. Annex III – List of interviewees

50Hertz
- Dr. Dirk Manthey, Project Communication
- Elke Korn, Project Manager „Thüringer Strombrücke“

Bellona
- Håvard Lundberg, Energy Advisor

Citizen Action Group Maldegem
- Annemie De Graef
- Geert Steenkiste

Deutsche Umwelthilfe (German Environmental Aid)
- Rotraud Hänlein, Project Manager “Forum Netzintegration”
- Dr. Peter Ahmels, Head of Renewable Energies

Elia
- Jeroen Mentens, Permitting and Environment, Negotiator
- Jeroen Maes, Project Manager “Stevin”
- Hugo Decoster, Permitting and Environment, Negotiator

FNE
- Adeline Mathien, Policy officer for Energy
- Alain Argenson

LPO
- Benjamin Kabouche, Managing Director
- Yvan Tariel, Responsible for Raptors

National Grid
- Julian Buttery, UK Community Relations
- Roseanne Battye, UK Community Relations
- Stephen Knight-Gregson, Principal Specialist – Major Projects
- Rob Graham, 3G Communications

RSPB
- Ivan Scrase, Senior Climate Change Policy Officer
- Aedán Smith, Head of Planning and Development, Scotland

RTE
- Gaëtan Desquilbet, Project Director Avelin – Gavrelle
- Philippe Rémy, Project Director Cotentin – Maine
- Martine Debiez, Stakeholders and Environment Department

Statnett
- Anders Grønstved, Grid Development Department
- Christian Færø, Project Leader "Ørskog – Sogndal (Fardal)"
- Gunnar Romsaas, Communications Department
- Julie Evensen, Project Coordinator "Nettplan Stor-Oslo"

TenneT DE
- Martin Groll, Public Affairs
- Marius Strecker, Stakeholder Integration

TenneT NL
- Camiel Masselink, Stakeholder Manager

Terna
- Adel Motawi, Relations with Local Authorities Manager
- Fiorenza Roghi, Outsourcer (Relation with Local Authorities Unit)
- Nicoletta Rivabene, Head of Programs Coordination – Environmental Analysis and Studies (Grid Development and Engineering Department)
- Fulvio Rossi, Corporate Social Responsibility Manager (External Relations and Communication Department)
- Cristina Pascucci, International Regulation (Regulatory Affairs Department)

WWF Italy
- Giuliana Improta, Head of Business & Industry Office (Corporate Partnerships Department)
- MariaGrazia Midulla, Head of Climate and Energy
- Irma Biseo, Corporate Partnerships & External Relations Director

WWF Norway
- Ingrid Lomelde, Head of Climate and Energy Department/Leder Klima- og Energiavdelingen

12.4. Annex IV - Further reading

Permitting procedures

- Roland Berger (2011) *Permitting procedures for energy infrastructure projects in the EU: evaluation and legal recommendations. Tender No. ENER/B1/452-2010. European Commission, Directorate-General for Energy.* Available at: http://www.gaslink.ie/files/Copy%20of%20library/20111014115839_Permitting%20procedures%20for%20ener.pdf
- Entso-e (2006) *Overview of the administrative procedures for constructing 110 kV to 400 kV overhead lines. Available at: https://www.google.de/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&ved=0CCcQFjAA&url=https%3A%2F%2Fwww.entsoe.eu%2Ffileadmin%2Fuser_upload%2F_library%2Fpublications%2Fetso%2Fothers%2Fprocedures%2520400%2520kv%2520lines.pdf&ei=xluiUM-QJYvMtAa7qYCwBQ&usg=AFQjCNG69Dl6rGrO8SYM35uJjicGK0oMfw*
- Realisegrid (2009-2011) REseArch, methodoLogIes and technologieS for the effective development of pan-European key GRID infrastructures to support the achievement of a reliable, competitive and sustainable electricity supply. Results available at: http://realisegrid.rse-web.it/Publications-and-results.asp
- European Commission (2011) *Proposal for a Regulation of the European Parliament and the Council on Guidelines for Trans-European Energy Infrastructure and Repealing Decision No 1364/2006/EC.* Available at:
- http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0658:FIN:EN:PDF

Acceptance and stakeholder involvement

- Prof. Dr. Petra Schweizer-Ries (2010) *Umweltpsychologische Untersuchung der Akzeptanz von Maßnahmen zur Netzintegration Erneuerbarer Energien in der Region Wahle – Mecklar (Niedersachsen und Hessen).* Available at (only German): http://www.fg-umwelt.de/assets/files/Akzeptanz%20Netzausbau/Abschlussbericht_Akzeptanz_Netzausbau_Juni2010.pdf
- Matthew Cotton and Patrick Devine-Wright (2010) *NIMBYism and community consultation in electricity transmission network planning*. Available at: http://www.supergen-networks.org.uk/filebyid/588/file.pdf
- Antina Sander (2011) *From 'Decide, Announce, Defend' to 'Announce, Discuss, Decide'? Suggestions on how to Improve Acceptance and Legitimacy for Germany's 380kV Grid Extension*. Available at: http://renewables-grid.eu/fileadmin/user_upload/Files_RGI/Antina_Sander_Thesis_Public_Participation_in_the_Energy_Grid_Extension_final.pdf
- Marco Althaus (2012) *Schnelle Energiewende – bedroht durch Wutbürger und Umweltverbände?Protest, Beteiligung und politisches Risikopotenzial für Großprojekte im Kraftwerk- und Netzausbau.* Available at (only German):

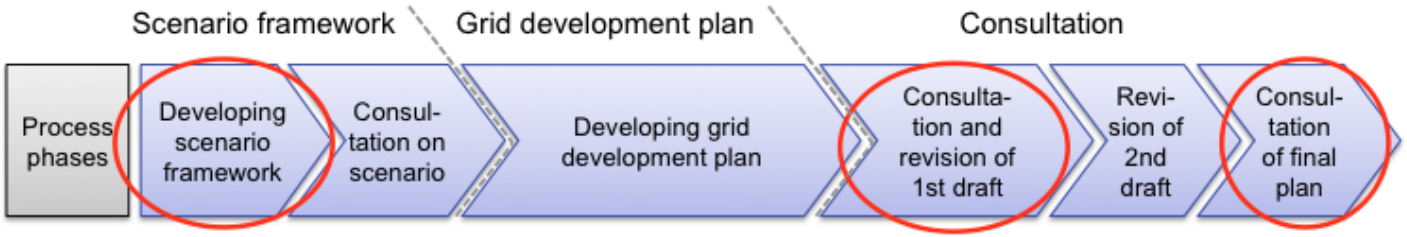
http://opus.kobv.de/tfhwildau/volltexte/2012/124/pdf/WB2012_13_Althaus.pdf

- Audun Ruud, Jens Jacob Kielland Haug, William M. Lafferty (2011) *Case Hardanger" En analyse av den formelle konsesjonsprosessen og mediedekningen knyttet til den omsøkte luftledningen Sima-Samnanger" av Audun Ruud, Jens Jacob Kielland Haug og William M. Lafferty.* Available at (only Norwegian): http://www.sintef.no/Publikasjoner-SINTEF/Publikasjon/?pubid=SINTEF+A19108
- Eurelectric (2003) *Public Acceptance for new transmission overhead lines and substations*. Available at: http://www.landsnet.is/linurogstrengir/islandogutlond/uploads/1048.pdf

Environment and Nature Conservation

- Good Practice Wind (2010-2012) *IEE project to address barriers to the deployment of onshore and offshore wind energy generation*. More information available at: http://www.project-gpwind.eu/index.php
- Froelich & Sporbeck GmbH & Co. KG, Kieler Institut für Landschaftsökologie, White & Case LLP (2012) *Netzausbau und Natura 2000/Artenschutz. Rechtliche und naturschutzfachliche Analyse typischer genehmigungsrechtlicher Fragestellungen sowie Entwicklung von Ansätzen zu ihrer Lösung*. Study commissioned by the German Ministry for Economics. Available at (only German): http://www.bmwi.de/BMWi/Redaktion/PDF/Publikationen/Studien/netzausbau-und-natura-2000,property=pdf,bereich=bmwi2012,sprache=de,rwb=true.pdf
- Dr. Dieter Haas, Dr. Markus Nipkow, Georg Fiedler, Richard Schneider, Waltraut Haas, Bernd Schürenberg (2003) *Protecting birds on powerlines: a practical guide on the risks to birds from electricity transmission facilities and how to minimise any such adverse effects*. Study on behalf of Nabu (BirdLife Germany) Available at: http://test.birdsandpowerlines.org/images/Protecting_birds_on_powerlines.pdf
- BirdLife Europe (2012) On the Road to Recovery? BirdLife Assessment of Progress on the EU 2020 Biodiversity Strategy. Available at: http://www.birdlife.org/eubiodiversityreport2012/
- Nabu (2012) *Umbau der Stromversorgungsinfrastruktur zur Integration der erneuerbaren Energien*. Avalable at (only German): http://www.nabu.de/imperia/md/content/nabude/energie/nabu_hintergrund_umbau_strominfrastruktur_110711.pdf
- AEWA and CMS (2012) *Review of and guidelines for mitigating/avoiding the conflict between migratory birds and electricity power grids in the African-Eurasian region.* More information: http://www.buwa.nl/aewareview.html
- Energieforschugnszentrum Niedersachsen (2011) *Ökologische Auswirkungen von 380-kV-Erdleitungen und HGÜ-Erdleitungen*. Available at (only German): http://d-nb.info/1020733411/34

12.5. Annex V - Procedure of grid development plan in Germany

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