

REALISEGRID WP3.7

Public consensus for new infrastructures

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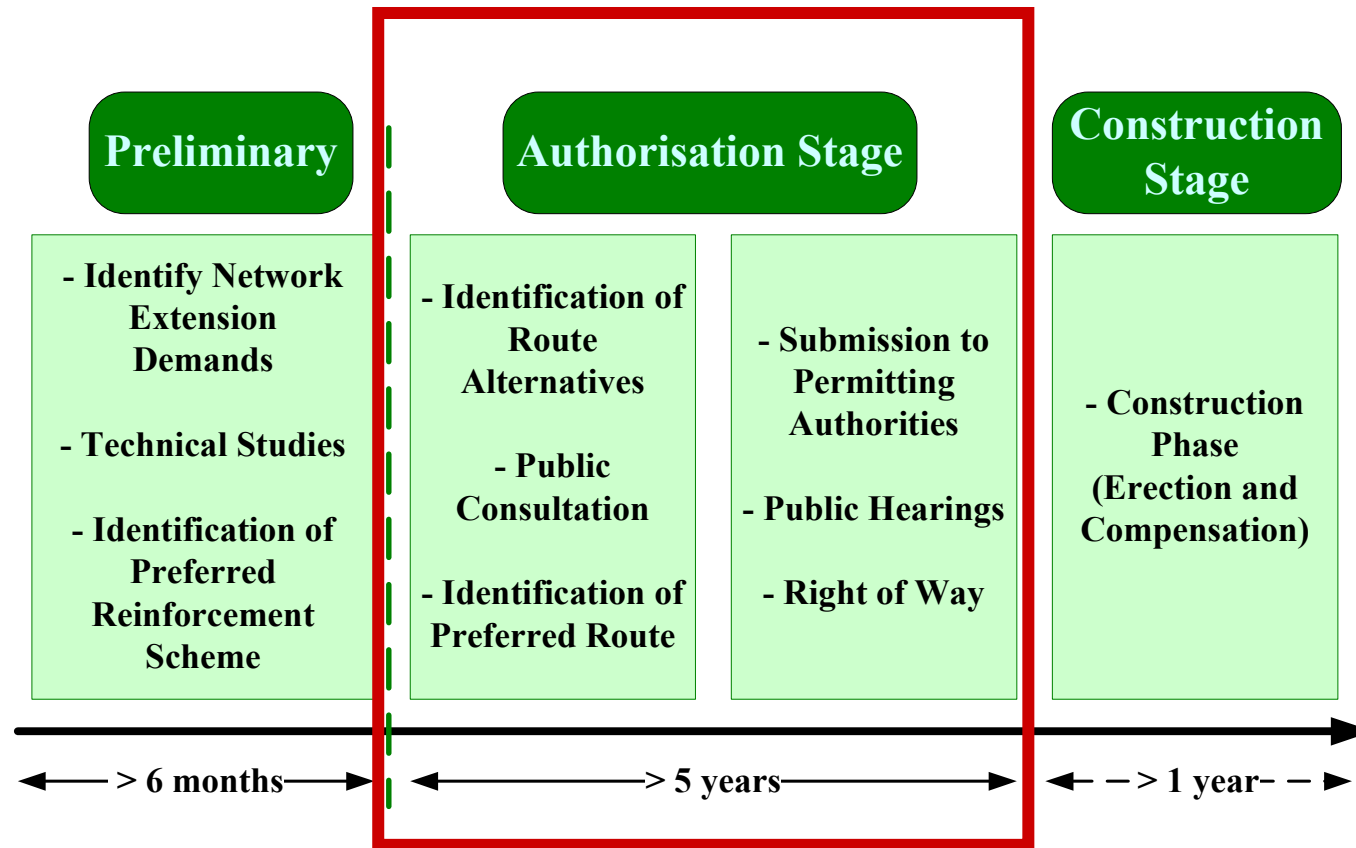
WP3.7

- D3.7.1 Review of existing transmission planning and approval procedures and coordination of infrastructure developments between TSOs, *TU Delft*
Authors: A.R. Ciupuliga, M. Gibescu
- Interim Report at the special request of the EC
Authors: A. L'Abbate, G. Migliavacca, A.R. Ciupuliga, M. Gibescu
- D3.7.2 Improving consensus on new transmission infrastructures, *TU Delft, RSE, Terna*
Authors: A.R. Ciupuliga, M. Gibescu, A. L'Abbate, G. Migliavacca
- With contributions from Terna, RTE, TenneT and APG

The review

- Real case studies (NL, IT, FR, AT), based on the experience of TSO partners
- Generalise and pin-point the main strengths and weaknesses of existing approval procedures
- Select the best practices from the current approaches

Stages and average durations of the transmission planning process



Source: ENTSO-E TYNDP (2010)

Obstacles

- The approval procedures are lengthy. This happens for various reasons:
 - Stakeholders can object at any time (AT, IT)
 - The authorization process does not follow the schedule set by law (AT, IT), while in France such a schedule does not exist
 - Interdependencies exist between the licensing process and the EIA (Environmental Impact Assessment) in IT and respectively the National Fitting-In Plan in NL.
- There is a low social acceptance of new transmission line projects:
 - Projects are not recognized by the Local Authorities and the population as essential
 - “Market” has a negative association in the public eye; the public does not see the benefits of the liberalized electricity market
 - In FR and NL the population refuses increasingly the “traditional” energy supply model: preference for DG and local integration of RES, which should obviate the need for “big” transmission lines
- Growing fear for public health because of EMF and other environmental concerns. No standardised EMF limits exist at European level → EMF effects concern the population.
- It is difficult to build new lines in natural protected areas.
- The NIMBY effect is very high.

Obstacles

- Lengthy discussions on the use of other transmission technologies such as underground cables.
- Differences in regulations and approval procedures between countries are a problem for international projects.
- Authorities are not suitably prepared for a project involving many parties; insufficient man-power.
- Insufficient support from politicians for transmission line projects.
- Gold-plating and overshooting of European legislation by the national laws → set unreasonably high constraints and give space and reasons for the population to doubt and complain.
- The EIA report is usually too detailed and implies high costs (in Austria approx. 4% of the total project cost).
- No appropriate trade-offs performed by the authorities between environmental issues and the public interest for security of supply.

Recommendations

- **Support and integration:**
 - Support from national and local political bodies for projects of European importance should be mandatory and defined by law.
 - The priority projects of the European Union should be integrated with the TSOs' strategic projects and vice-versa.

- **Communication with politicians and the local population should be intensified:**
 - Work-groups with local politicians
 - Shared solutions: dialogue with regional and local stakeholder organizations (already in FR, IT and NL).

- **EU and national legislation should be harmonised and overshooting through national laws (gold-plating) should be eliminated.**

- **European-wide standards on EMF to define exposure limits should be developed.**

- **The manpower in charge of infrastructure projects at the authorities' level should be sufficient and knowledgeable.**

Recommendations

- **Approval procedures (AP):**
 - Clearly define all the steps (also necessary documents); only one moment in time when parties can object (NL); legal consequences for deliberately obstructing the schedule of AP.
 - Simplification of the AP for priority projects; reduced number of authorities in charge of authorization procedures (preferably at national level). Positive experience in NL and IT.
 - The process of obtaining licenses should be done after the route for the new line has been approved.

- **Define good integration and compensation schemes that should envisage:**
 - The **improvement of the integration into the landscape** of the new line
 - The **improvement of the integration into the social environment** of the new line (FR, IT)
 - The **compensation for visual and audio pollution and any other important inconvenience** caused during the construction work of a new line.

Recommendations

- Create a legal basis for allowing construction of new transmission lines in natural protected areas provided the environmental effects can be reduced and good compensation measures are taken.
- Use innovative technologies and optimise the existing grid by extending the lifetime of assets and by using the existing grid to its full potential.
- “Infrastructure corridors” for important infrastructure projects should be created. Infrastructure planning should be coordinated (IT, NL).
- Strategic Environmental Assessment (SEA) is an opportunity and a tool for preventive discussion with stakeholders for locating new transmission infrastructure. Incorporate SEA results in EIA.

Consensus improvement

“Consensus is a collaborative process where all / most participants develop and agree to support a decision that is in the best interest of the whole”

- Consensus seeks also the resolution of minority objections.
- Result: high level of commitment to the solution resulting in fast project implementation.
- **Stakeholders are actually participative.**
- Consensus participants connect legitimacy to fairness, wisdom and efficiency

In complex problems it is impossible to obtain 100% support for a solution

Consensus related findings of REALISEGRID D3.7.1

| Obstacles |
|---|
| low social acceptance of new transmission line projects |
| fear for public health because of EMF and other environmental concerns |
| difficult to build new lines in natural protected areas |
| very high NIMBY effect |
| lengthy discussions on the use of other transmission technologies |
| insufficient support from politicians for transmission line projects |
| no appropriate trade-off performed by the authorities between environmental issues and the public interest for security of supply |
| Recommendations |
| support and integration |
| intensified communication with politicians and the local population |
| good integration and compensation schemes |
| Strategic Environmental Assessment (SEA) - an opportunity and a tool for preventive discussion with stakeholders for locating new transmission infrastructure |

The new transmission line problem

- should be treated as an unstructured problem that needs:

- a high public participation
 - an involvement of experts
- } problem structuring

→ *engage multiple stakeholders in an open dialogue → they redefine their vision of the problem*

- unstructured problem: “no agreement on what the problem is and neither on what the means for solving the problem are”

Action plan for priority projects

Combine two synergistic actions to streamline and facilitate the transmission planning process.

- **an efficient consensus process** that also implies a good information flow from and to the population (bottom-up)
 - providing a clear vision of benefits and costs of the new infrastructure.
 - promoting an educative action re. the perception of a new line.
 - Clarify the relationship between RES integration and grid development.
 - Clarify the relationship between costs and different technical solutions
 - promoting a thorough evaluation of property value → fair compensation schemes.
- **a clear regulatory approach** harmonized throughout Europe (top-down)
 - acting on the legal framework: simplify, harmonize, set time limits and rationalize the procedure
 - creating a facilitator to promote shared solutions and to manage the entire procedure in trans-national (and also national) cases.

A good information flow to all consensus participants

- Information given beforehand to the participants:
 - general: about how power systems work and what transmission planning involves
 - background information of the project: costs & benefits of the new transmission project (D3.3.1), and any other important & relevant information for the problem to be solved.
- Communication strategies: how to present the information
- TSO experience:
 - give as much information as possible
 - answer questions such as “Why?”, “How?”, “Where?”, “What are the benefits and impacts for each stakeholder?”

Impact reduction

- General “electrical measures” (e.g. electromagnetic field reduction, more environmentally friendly technologies etc)

- Improving integration of installations
 - **into the landscape:** group together infrastructures, identify best possible route

 - **into the social environment:** consider expectations of inhabitants and build shared solutions with regional and local actors

Fair compensation schemes

- at both community and individual levels
- proportional to
 - the actual value of the caused damage
 - the importance of the project
- to individual parties: also for other caused inconveniences (not related to land usage & propriety value deterioration)
- free-riding strategies amongst stakeholders should not be fostered

Project facilitator

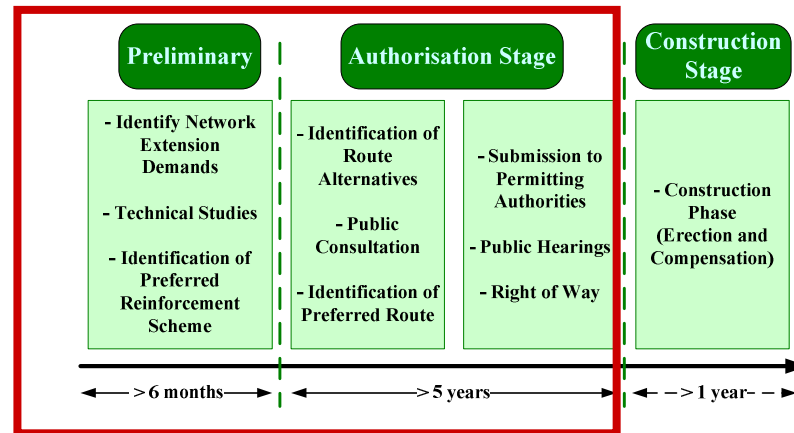
- creation of a skilled and impartial body to act as project facilitator for infrastructure projects; at EU level a new, independent body.

- it should be able to guide the process towards a supported solution by :
 - engaging with all the participants
 - solving when necessary cases of minority dissent
 - isolating “continually antagonistic attitudes”.

- at international level it should be able to manage cultural differences

Increasing public acceptance

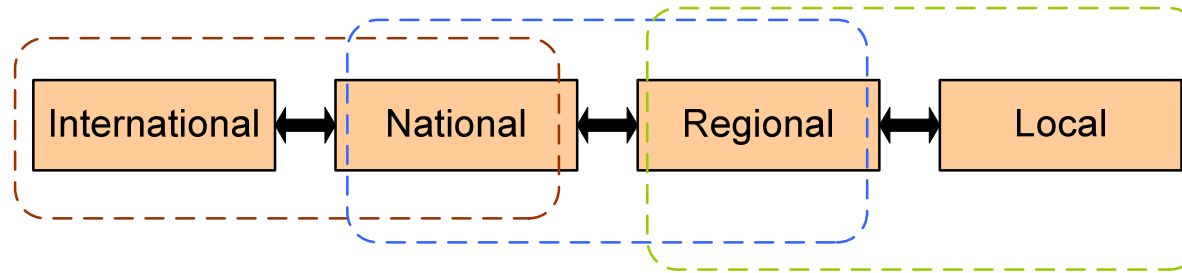
- Identify and involve all the affected stakeholders in the decision-making process
- Seek consensus from early phases of the planning process
- Consensus tool used in both preliminary and authorization stages



Increasing public acceptance

- Consider public perception of new transmission lines and study conflict dynamics (public attitude changes due to opportunity reasons)
- Hard to get all stakeholders to agree → the need for ***compromise seeking*** arises
- Compromise seeking *decision aid systems* (DAS) for selecting a power line path considering socio-economic interests of stakeholders; GIS + multicriteria weighting techniques

Consensus processes



- Increase acceptance at different levels
- Support of authorities needed
- Regional-local level: the experience of the ESTEEM tool created by the Create Acceptance EU project could be used for managing public acceptance for each individual community that is affected by the transmission project.

Concrete actions and time horizons

| Time Horizon | Actions |
|-----------------------|--|
| Short-mid term | Transparent and serious communication and information to the public |
| | Involvement of public in the decision-making from early stages of the planning process |
| | Utilisation of a neutral cost-benefit analysis |
| | Communication of inaction costs |
| | Creation of a skilled and neutral project facilitator |
| | Set up of a clear, fixed timeline for approval |
| | Utilisation of innovative transmission technologies |
| | Exploitation of existing transmission assets |
| | Fair compensation schemes |
| | Development of European wide standards on EMF |
| Mid-long term | Streamlining of authorisation processes |
| | Pan-European harmonisation of procedures |
| | Set up of clear incentive schemes |
| | Transmission planning anticipation with respect to generation planning |
| | Harmonisation of EU and national legislations |
| | Implementation of market reforms |
| | Definition of a merchant investment framework |

Thank you for your attention!