

D5.1 Detailed action plans in order to address concerns regarding EMF and to improve permitting procedures by early stakeholder engagement

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380 - kV overhead line Bertikow-Pasewalk

Pilot project for BESTGRID



Action plan 1 – work package 5 (Deliverable 5.1.)

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380 kV Bertikow-Pasewalk - pilot project for BESTGRID Action plan 1 for work package 5 (Deliverable 5.1.)

50Hertz is the transmission system operator for north-eastern Germany. It operates a transmission grid at voltage levels of 220 and 380 kV with a total line length of nearly 10,000 km. Both in terms of surface and line length, this corresponds to one third of the total high voltage grid in the Federal Republic of Germany.

The north-eastern part of Germany is one of the regions being of major importance for the German energy transition. With its offshore installations and windswept coastal area and lowlands, it delivered about 40 per cent of all installed wind capacity in Germany in 2012. As a result, the region is a big exporter of electricity generated from renewable sources within the German market.



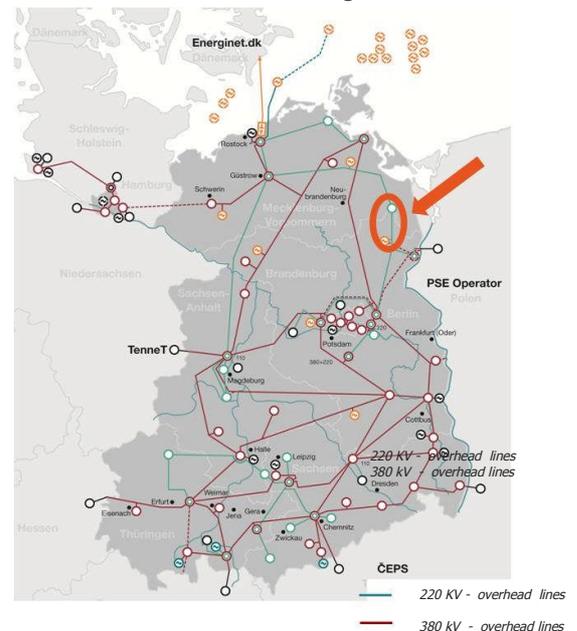
This is only possible if the existing line grid can guarantee the integration of renewable energy - predominately wind power, although recently solar power has also been on the rise, in addition to biomass. As such, the grid needs to keep pace with the increasing volume of energy injected by the distribution grid, the higher need for transmission capacity as well as the fluctuations in generation connected to the weather-dependent character of renewable energy sources.

50Hertz sees itself as a partner of the energy transition and its realisation. The resulting consequences for the conversion of the grid infrastructure, the questions regarding the need for transregional transmission and the necessary speed of the conversion, the technological solutions available and the innovations identified as necessary have certainly caught the public eye. That is why over the past number of years, 50Hertz has consistently created and developed different methods to make this public debate possible. The cooperation with RGI and BESTGRID are therefore excellent opportunities to successfully keep the discussion with the general public going.

One important aspect of the public debate on the energy transition in Germany and the grid development this requires, is to explain the technical aspects of the energy turnaround. Most projects actively pursued by 50Hertz in the scope of grid development concern the replacement of infrastructure on existing line routes. In other words, current 220 kV overhead lines are being replaced by overhead lines with a voltage level of 380 kV. On the one hand, the distances to be respected for the electrical systems as well as the limit values to be complied with for electromagnetic fields in the low frequency range of the 50Hertz control area make it necessary to construct new line supporting pylons. On the other hand, the reconversion of installations in the vicinity of living areas has been ongoing for many years. Criticism is also focussed on the consequences of this increase in voltage. In general, the technical installations receive more attention given the consumer-oriented and critical debate on the energy transition.

This makes it necessary for all project communication to provide more elaborate answers to questions about the correlation between electrical systems and their low frequency fields. This creates communication challenges (see the EMF challenge) that 50Hertz wants to tackle together with BESTGRID and other partners in the scope of work package 5.

The project chosen in this project communication context is the 380 kV line between Bertikow and Pasewalk, as it serves as a perfect example of all challenges listed above:



- The expansion is a particular result of the increased feed-in of wind power from the wind farms located nearby.
- There is already a 220 kV line between the grid connection points Bertikow (Brandenburg) and Pasewalk (Mecklenburg-Western Pomerania), which now has to be replaced with new infrastructure.
- The project was included in the Federal Requirement Plan Act as project no. 11 in 2013 and, as a project still to be realised, is therefore in its initial phase, as is the BESTGRID project.
- It is one of the first projects to follow the obligatory approval procedure performed at the national level by the Federal Network Agency in Bonn (and therefore not subject to individual state authorities).
- In the procedure regulated by the Grid Expansion Acceleration Act (NABEG) of 2011, new obligations apply with regard to transparency and public relations, which have to be met for the first time in this particular project.

The action plan presented here

- provides background information on the grid development project Bertikow-Pasewalk targeted by the pilot project,
- formulates the underlying questions,
- describes the planned communication measures and
- explains the temporary schedule.

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I. Background

I.1 Description of the project

The following basic information is of particular importance for the Bertikow-Pasewalk project:

- *Length and trajectory of the line:*

The line is only some 40 kilometres in length. The course of the overhead line will presumably cover a distance of 20 kilometres on the territory of both Brandenburg and Mecklenburg-Western Pomerania each: from the substation of Bertikow (in Brandenburg) to the border between the states and from there on to substation Pasewalk or Pasewalk Nord (in Mecklenburg-Western Pomerania). There is already a 220 kV overhead line between both grid connection points. The planned objective is to follow the old line route as much as possible wherever practical. Afterwards, the existing line will be removed.

- *Federated states and districts affected by the line construction project:*

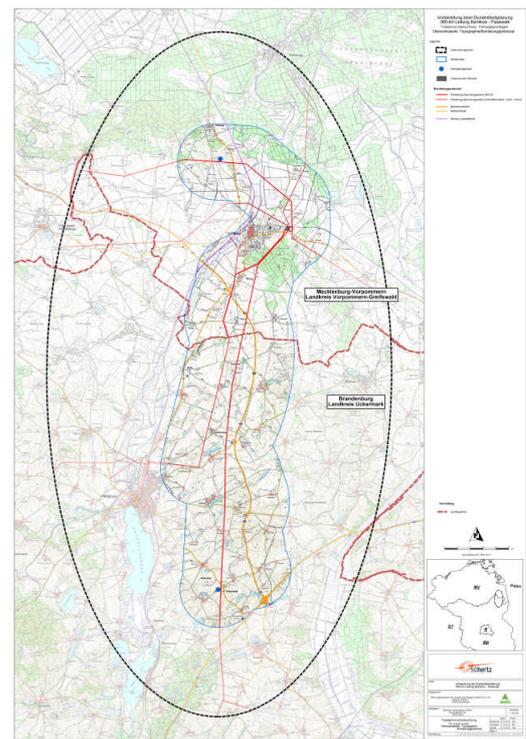
The districts Uckermark in Brandenburg and Vorpommern-Greifswald in Mecklenburg-Western Pomerania are affected by the project.

- *Competence for the approval*

According to the Grid Expansion Acceleration Act (NABEG) of 2011 and the first Federal Requirement Plan Act of 2013, the project is subject to the competence of the Federal Network Agency (FNA) as it is a grid development project spanning several states.

- *Investments*

An investment volume of 117 million EUR is planned for the construction of the new overhead line. An additional sum of 38 million EUR has been budgeted for the technical development of the grid connection points, in particular the construction of a new switchyard, Pasewalk Nord,



with 110/380 transformers. This new substation will also serve as the direct feed-in point for power generated by the surrounding wind turbines.

- *New line constructions and planned commissioning of the project:*

The construction phase is currently planned for 2018/2019. The 380 kV overhead line Bertikow-Pasewalk should be taken into operation in 2019.

- *Approval procedure:*

The project is expected to follow two approval phases pursuant to the NABEG. In the first stage - the federal sector planning - a suitable corridor with a width of 500 to 1000 metres is identified and laid down in the scope of spatial planning. In the second stage - the plan approval stage - the exact course of the overhead line within the chosen corridor is determined. For both procedural stages, the Federal Network Agency is the competent authority. The federal sector planning is expected to take place in 2013/2014 and the plan approval procedure should begin in 2015 at the latest and be concluded in 2017.

One aspect of particular mention is the fact that prior to the adoption of the 2013 federal requirement plan, the state authorities of Brandenburg and Mecklenburg-Western Pomerania, competent for the approval, already decided in 2012 not to carry out a regional planning procedure for the first stage. The motivation for this was the fact that the new overhead line would be constructed in parallel with a corridor that was already included and approved in the regional planning. After the transfer of authority, however, the Federal Network Agency decided to carry out the federal sector planning, which replaced the regional planning, after all.

Presumable proceeding of the planning and approval procedure
(as in January 2014)

Federal sector planning

- 03/2014: application for federal planning pursuant to § 6 NABEG
- 04/2014: public project conference
- 10/2014: application pursuant to § 8 NABEG
- 11/2014: start of the federal sector planning
- 05/2015: end of the federal sector planning

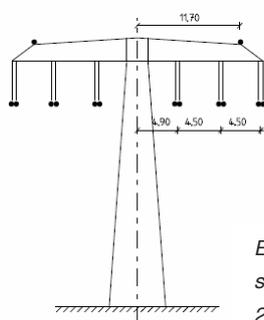
Planning approval procedure

- 06/2015: application for the plan approval procedure
- 07/2015: public project conference
- 08/2016: submission of the plan approval documents
- 10/2016: start of the plan approval procedure
- 12/2017: key planning decision

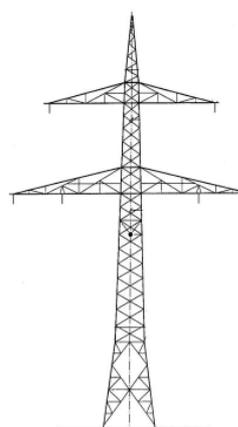


- *Appropriate areas for wind power and pylon types*

The area of Western Pomerania and Uckermark is already one of the top regions when it comes to generation of renewable energy from wind, sun and biomass. Additional areas suitable for wind power generation are currently being identified and studied in Brandenburg. The picture here shows the current line in the immediate vicinity of already installed wind turbines. The current line was conceived and constructed as a double-circuit overhead line with single-level pylons in 1957. This type of pylon has an average height of 26 metres and carries all three phases of an electrical system at the same level. The initial plan stipulates the construction of double-circuit two-level pylons instead of the single-level type. In this configuration, the three conductors of the same system form a triangle. The pylons reach an average height of 50 metres. With "partitions" of 2.5 metres each, the height of the transmission tower is adjusted to the construction requirements. The images below allow a comparison of both mast types at approximately the same scale.



*Existing 220-kV pylon –
standard height approx.
26m*



*Planned 380 kV pylon –
standard height
approx. 50m*

1.2 Situation of population, existing experience with power line projects

The planned overhead line will affect two districts and two federated states. This causes a special starting position for project communication: with regard to political communication, there are two independent groups of multipliers and decision-makers, meaning that there can also be two different political cultures. In the scope of stakeholder management, it will become apparent to what extent these differences will lead to two different packages of measures and a different project communication approach.

Aside from the differences mentioned, there also exists a long list of common factors, which need to be taken into consideration for the basic communication conditions.

- The region has seen a rise in energy infrastructure over the course of many years. Multiple substations are located in the relevant area and the existing overhead line between both grid connection points has existed for many years now.
- Both district areas are locations in which investments are made in renewable energy. Both wind turbines and photovoltaic panels have been installed in the appropriate areas.
- Discussion can be expected concerning the appropriate areas for wind power, possible opportunities and possible disadvantages resulting from the development of RES infrastructure. In any case, it is as yet unclear whether the political decision-makers and the public opinion on these themes have reached the same conclusions and similar decisions.
- Both districts are part of the thinly populated areas of north-eastern Germany. In general, economic emigration and erosion are imminent after the difficult phase of social and economic integration following the German reunification of 1989/90.
- The state governments of Mecklenburg-Western Pomerania and Brandenburg equally labour for a forced development of renewable energy sources and take a positive stance towards the required grid expansion. Nevertheless, it is also part of the political position of both states' governments to enter into public and critical dialogue with an increasingly sceptical population and to study measures provided through the public debate and the stronger political and economic participation by citizens.

For this project, this presents the challenge to closely monitor the way stakeholders deal with the initially identical content of communications and to study whether and to what extent this situation makes it necessary to differentiate the implementation of the measures.

From the current point of view, two arguments can be cited in favour of differentiation:

1. The stakeholder analysis shows that the measures need to take different approaches in the two separate communication target areas.
2. The institutes involved, with which 50Hertz usually coordinates communication measures in advance, are in favour of a tailor-made approach. (Out of respect for the dialogue partners, 50Hertz follows the principle of complying with their needs where possible, except when this is contrary to the transparency principle and the informal dialogue with citizens, which 50Hertz committed to of its own conviction with regard to politics and the general public.)

II. Updating the concept for grid communication

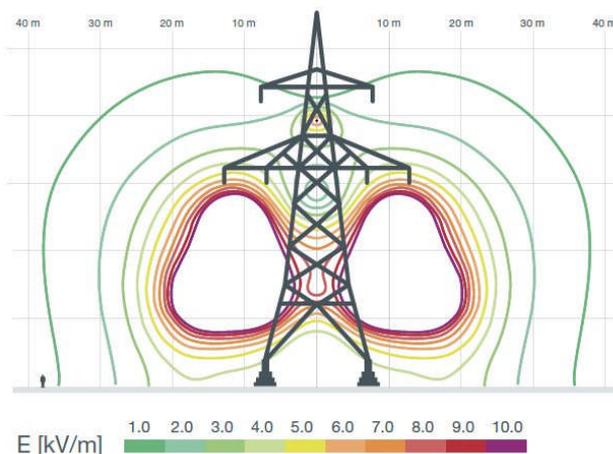
In view of past experiences with the decreasing acceptance of grid expansion projects, 50Hertz developed a concept for project communication in 2012. This concept includes the initial analysis of the communication themes and the subsequent offer of fitting means of communication to the target groups. In this regard, the theme of electromagnetic fields were a recurring subject of the questions asked by citizens and representative citizens' organisations during an information campaign in the scope of the southern Uckermark line. The questions of the local residents also concerned the difference in electromagnetic fields between the old and new lines. The action group that was created furthermore referred to critical publications on the possible negative effects of high voltage overhead lines and for this and other reasons demanded the realisation of the high voltage line as an underground cable.

In order to further develop of project communication instruments dealing with the specific subject of electromagnetic fields, certain challenges can be determined.

1. The competences to answer questions regarding the health effects can be found in the medical sector, not in the field of electrical engineering. A mere reference to the applicable and legally determined limit values no longer suffices, but only furthers a political limit value discussion which is primarily driven by fear.
2. Another challenge concerns the suitable means of communicating this theme to a broad public, as the residual risk, which could not be precluded by research, has become a permanent source of distrust.
3. For this reason, the dialogue with many different stakeholders shows that: until now, no sufficiently satisfactory communication approach is available to deal with the intrinsic and emotional aspect of the theme "electromagnetic fields" in such a way that all stakeholder groups are pleased (see also next section: the EMF challenge).

The pilot project at BESTGRID therefore contributes to the further development of the existing 50Hertz project communication concept in three ways:

1. The **content** to be conveyed needs to be reworked in accordance with the communication challenges in view of the interdisciplinary subject.
2. The **manner** in which this content is communicated, should be able to deal with the distrust that has developed and the fears that are so easily caused.
3. The content and means of communication should be integrated in the existing project communication **concept** in such a way, that it complies with the new requirements made to the formal legal framework as set forth in the NABEG (see also action plan 2, stakeholder engagement).



II. 1 The EMF challenge

Low frequency electromagnetic fields are considered a special challenge in the scope of project communication for German grid development. The individual aspects are repeated here in short using key words:

1. EMF are a technical aspect about which little is known by the general public, which has little experience with it - despite the fact that these fields are present in and around all electrical appliances that they use in day-to-day life.
2. EMF are an emotional subject which can cause concerns and a feeling of powerlessness regarding health, in particular children's health, and the suspicion of an acute health risk.
3. EMF are a strong argument in the defensive position of affected citizens, which leads to an unconditional, immediate and irrefutable demand for clarification and prevention. Moreover, it is difficult for the project developer to distinguish whether actual concerns are being expressed or whether the argument features in a NIMBY strategy. In each case, however, the subject of EMF needs to be explained and risk prevention measures have to be implemented.
4. Following a similar routine each time, the reference to EMF always provokes the reproach of negligent behaviour towards people's health in the public opinion.
5. EMF raise the intrinsic matter of prevention: either absolute (NIMBY), technical (e.g. underground cables, direct current) or procedural (larger distance, more research).
6. There is great uncertainty on how to correctly deal with EMF, as in the first place, different limit values apply within Europe and in the second place, political groups have the tendency to support their critical discourse with "political limit values" rather than scientific facts.
7. In principle, the EMF phenomenon never escapes the suspicion of residual risk. Basically, a harmful effect will be suspected until absolute proof can be provided.

Project communication can currently only offer an incomplete solution to these challenges. In the past, existing limit values were usually referred to. In other words, a health risk scenario was answered with legal and formal arguments; if a lack of precautions and the use of risky technology were reproached, reference was made to independent scientists and institutions from the health industry; the matter of a

situational threat to residents was answered with mathematical calculations that prove to be compliant with the limit values (in the 26th German federal immission protection ordinance (BlmschV)).

The BESTGRID pilot project allows 50Hertz to now tackle the challenge of providing new intrinsic, instrumental, emotional and analytic footing for the dialogue with citizens. This means that different knowledge domains need to be involved in the development of appropriate communication measures before the civil dialogue instruments can be conceived at all, be it with regard to text, materials and organisation. In any case, it is already safe to say that the different communication challenges cannot be handled without the support of third parties, given the current situation (the project developer justifies his project to the parties involved, who are distrustful and doubtful).

That is why in the initial analysis phase, different experts need to be involved first in order to enable an adequate assessment of all aspects of this risk theme and open up all avenues for possible solutions.

The communication subject of electromagnetic fields is the same for both communication arenas: the discussion can, however, take place in a different manner depending on the relevant political culture and the different structures and communicators.

III. Stakeholder mapping and the Strategy for Grid Project Communication

Stakeholder mapping is the first step of communication analysis for project communication. The group of project-relevant stakeholders can be further divided in multiple subgroups of institutions and persons who assume different roles and role groups in the scope of the planned project²:

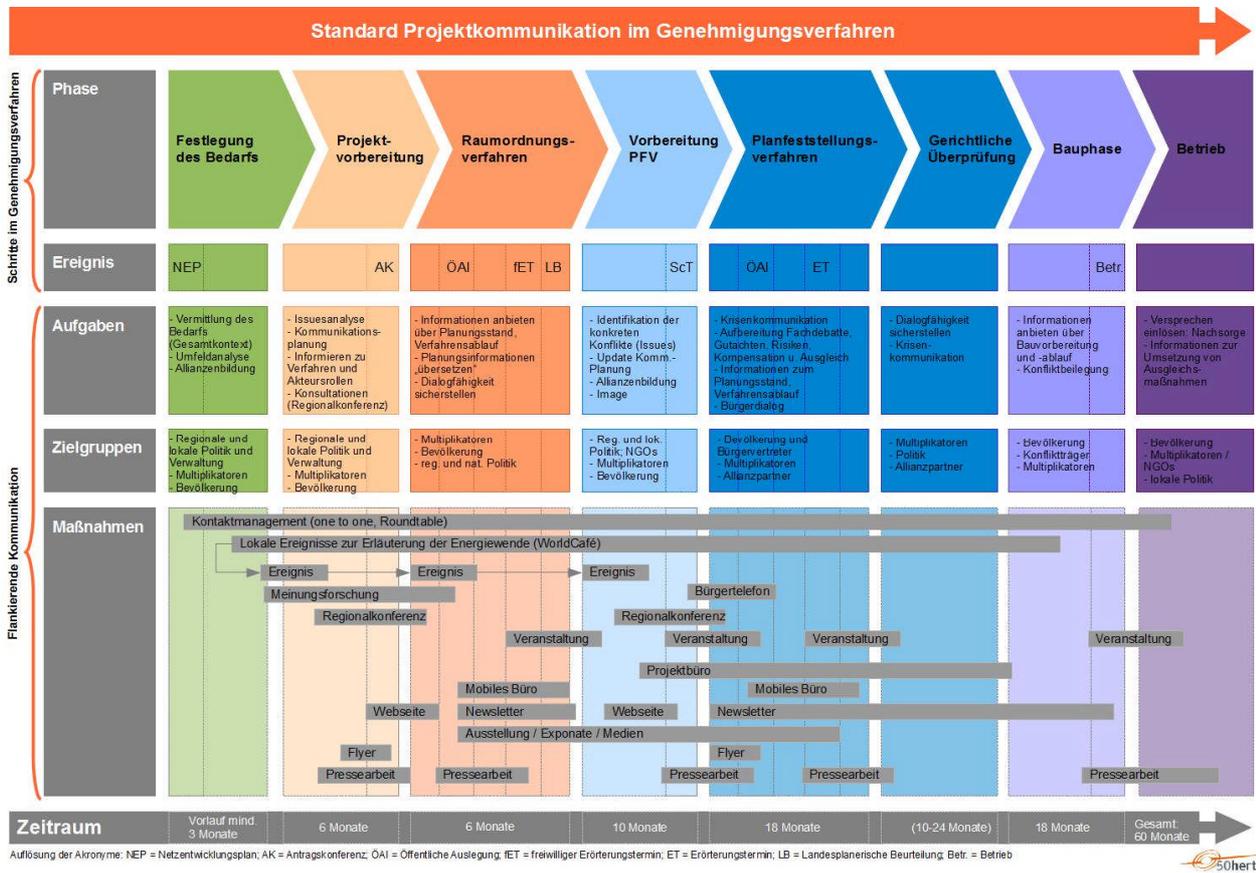
1. Federal and state authorities competent for authorisations and procedures
2. Energy policy decision-makers and multipliers
3. Representatives of public interests (competent authorities, environmental associations, operators of infrastructure facilities, etc.)
4. Local and regional disseminators from the political world, administration, associations, the economy, civil society
5. Media
6. Local residents and other citizens

In the general project communication strategy, the needs assessment and approval process is split up into different phases, which are all assigned different target groups, formal communication events within the official procedure and communication measures (see diagram below).

The project-related stakeholder analysis should then verify the timing and content of these measures, supply directions for their modification and determine the need for project-specific measures.

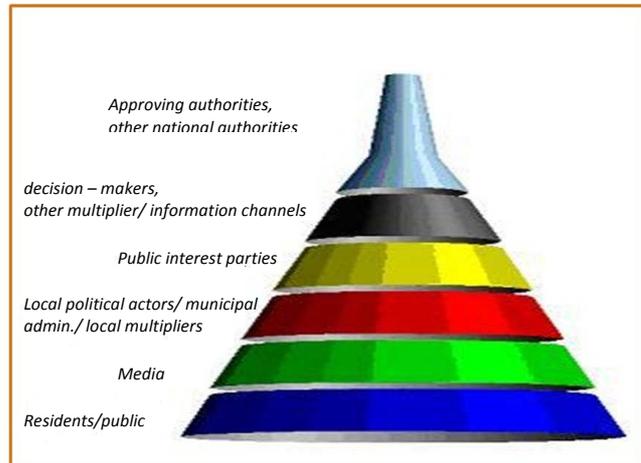
Stakeholder mapping is conceived as a longer term process, which is by no means concluded when the discussions with stakeholders commence. Rather, the list of stakeholders is gradually expanded, partly based on the discussion partners' recommendations, in the scope of the stakeholder discussions.

² Role group in this context signifies that institutions can represent different interests and therefore take up different positions with regard to the project and the course of the procedure. A classic example is a District Administrator, who is a competent authority, a representative of the public interest and a political decision-maker all at the same time.



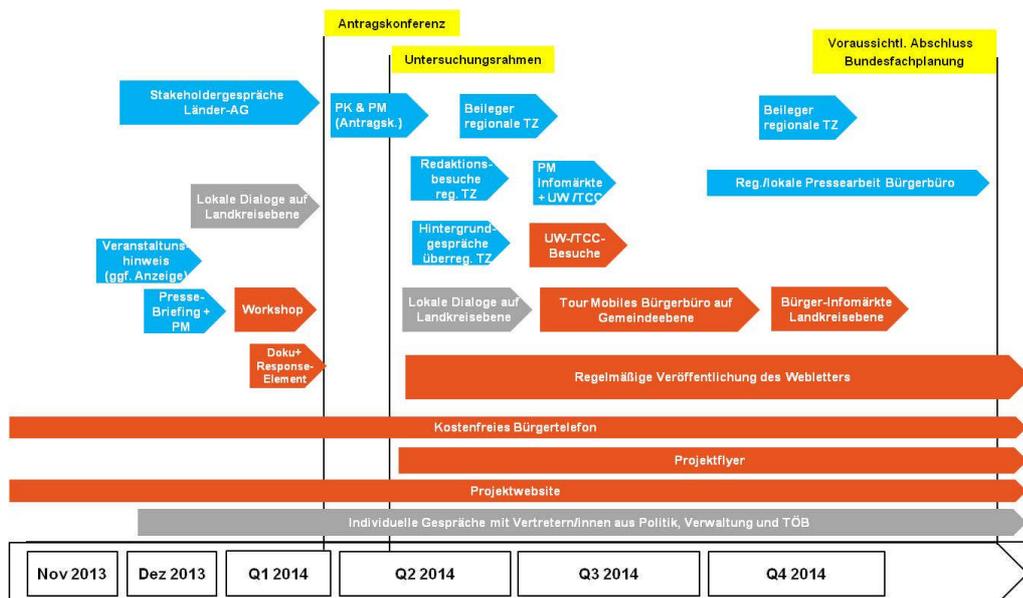
After the adoption of the federal requirement plan act in the summer of 2013, 50Hertz began making preparations for the approval procedure to be carried out by the Federal Network Agency. This was also the starting shot for stakeholder mapping. The following steps have already been taken or are still ongoing in the scope of further stakeholder management:

- 2012 - Contact with the spatial planning authorities of Brandenburg and Mecklenburg-Western Pomerania.
- 09/2013 - Contact with the licensing authority, in this case the FNA, with the creation of the competent licensing unit N13. Monthly coordination sessions have taken place since then.



- 09-10/2013 – Stakeholder mapping of levels 1-4 (state authorities, energy policy disseminators at state level, representatives of public interests, local administration.
- 11/2013 - Appeal to state governments (MWE Brandenburg and Ministry for Energy of Mecklenburg-Western Pomerania) and to the FNA to constitute an informal joint working group for the 380 kV overhead line.
- 12/2013 - Individual contact with stakeholders at levels 1-4 with personal mailing.
- Since 01/2014 - Meetings and stakeholder talks at the state and district levels.
- 02/2014 - First meeting of the joint working group.
- 03/2014 - Contact with local and regional media.
- 03/2014 - Information to the general public and local residents and contact through two regional evening meetings with route corridor workshops.

The following schematic gives a final overview of the communication planning with a focus on the year 2014.



In addition to the project-related stakeholder mapping, the search for stakeholders who can be consulted for the concrete content of the EMF communications, begins in January 2014. The focus lies on institutions, which have proven to be experts in the relevant aspects of the theme and can supply content as well as advice on the organisation of the information measures. These are institutions and persons who

- work on the medical aspects of the effects of electromagnetic fields (e.g. Federal Office for Radiation Protection, Information Centre for Mobile Communication, etc.).

- work on the psychological and sociological aspects of the human behaviour such as how risks, fear, insecurity, trust or loss of trust are dealt with (e.g. Max Planck Institute for Human Development Berlin).
- can help create a representation of the physical and technical conditions of low frequency electromagnetic fields that is adequate for the target group.
- are educational experts on how to handle the emotional processing of risks and anxieties and who can provide impulses to the development of measures for the planned information campaign.
- are regional and local authorities in the field of medicine and environmental education and can therefore be considered trustworthy in the appraisal of the EMF topic in the project region.

IV. EMF measurement

Many citizens already live in the vicinity of high voltage lines. The grid expansion of the high voltage grid, which mostly concerns the replacement of older overhead lines having a lesser capacity, makes local residents wonder about the precise nature of the changes. This also includes the emissions, such as the crackling of lines, the buzzing of transformers or the intensity of electromagnetic fields.

In specific cases, 50Hertz took measurements on-site for affected residents in order to provide tangible proof for actual or calculated values. During an information campaign for the Uckermark line project in Brandenburg in the summer of 2012, these measurements on individual request were intentionally used in the scope of communications for the first time.



The experiences were positive without exception. From the communication point of view, this enabled the creation of a long list of starting points for further technical discussion:

- Face-to-face and respectful approach: offering a personal and point-by-point measurement on site can emphasize that individual requests are taken seriously by 50Hertz.
- Dedication: by engaging in personal contact, 50Hertz can make clear that even individuals have options at their disposal to help them understand the theme, which is often difficult to assess for the affected parties.
- Gathering experiences: in dialogue with the experts, the interested parties obtained a great deal of information which they would probably not have learned through private study or a lecture. Experience-based learning can also aid in making an adequate assessment of the existing emissions.

- Opportunity for information transfer: in general, such a campaign can offer a good opportunity to transfer technical knowledge which would otherwise be difficult to bring to people's attention.
- Risk management: for both sides - residents and system operator - the "field measuring" campaign is a possibility to not merely tolerate or delegate the risk or conflict, but to actively engage with one another to search for possible technical and organisational solutions. This currently includes the decision-making process on the distances between overhead lines and residential areas, the monitoring of operational states, the needs assessment for an underground cable and the contact and dialogue with residents through other channels than planning and construction when needed.

BESTGRID now offers the possibility to gather all these good but unsystematic experiences in a stringent concept and in doing so answer a list of open and at times critical questions. To our current knowledge, these questions are:

- How should a system operator handle the fact that these measurements only apply at that specific time and location?
- Which additional information on the health aspects is necessary and how can it be integrated in the concept?
- How can a possible reproach by different parties who oppose the project, claiming that the measure is some kind of "magic trick", be handled?
- How does the campaign have to be planned to make a separate challenge into a theme but still keep it embedded in the general project communication approach?
- Are the first assumptions of the "risk management", "dedication", "face-to-face and respectful approach", "gathering experiences" confirmed in the methodical exchange of ideas with experts in the fields of psychology, sociology, education or environmental protection?

The tasks described here are studied in five work units as well as integrated in the ongoing project communication programme for line construction projects. These work units are:

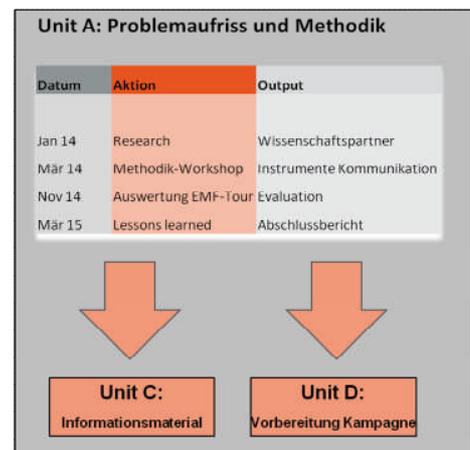
- Unit A: problem outline and methodology
- Unit B: stakeholder dialogue
- Unit C: information material
- Unit D: preparation of the award criteria

- Unit E: roll-out of EMF tour

In the first stage, it is important to identify experts and expert knowledge and to perform a good preliminary analysis of the issues determined in advance (**Unit A**). A decisive factor will be which methodical and conceptual estimates are received from the other disciplines and will as a result increase and modify the initial questions.

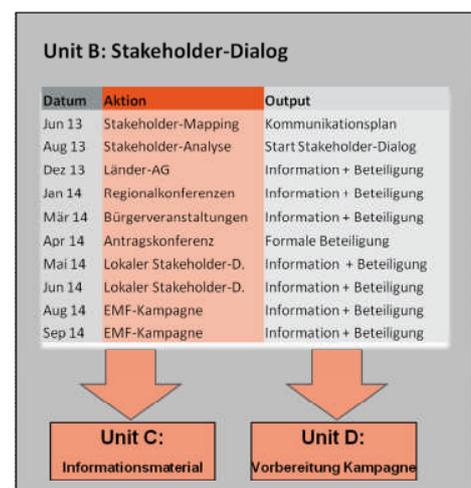
Furthermore, Unit A also reviews the content of the information published so far by any other parties. It will verify which information is congruous and how it might be used in our own material.

It is also important to establish through contact with other institutions whether and how cooperation is possible and useful. "Alliance building" is the key word here. The objective is to compensate for the expertise 50Hertz lacks in the fields of medicine, behavioural research or the European limit value discussion through cooperation, and in doing so provide interested stakeholders with this information in the scope of project communication. Experts will also be asked whether they are interested in supporting the planned EMF tour. As things stand, this also appears imperative as it establishes clear roles and reinforces the credibility of the campaign.



The work by Unit A will determine the requirements for the development of information material (Unit C) and the conception of the EMF campaign (Unit D). The overviews inserted here show the timing for the individual steps of the five work units.

Unit B organises the EMF aspect for the ongoing stakeholder dialogue of the 380 kV overhead line Bertikow-Pasewalk construction project. The integration of the EMF campaign and the BESTGRID context in project communication is a double communication challenge as it would be counter-productive if target groups affected by the line conversion were to perceive both aspects as bothersome. This is especially true if they are afraid



of being treated as "guinea pigs" by scientists or the European Commission.

It is absolutely necessary to adjust work package 5 to the exact event and authorisation planning. The consequences that changes and delays in an individual project area cause for the BESTGRID scenario should therefore be thoroughly tested. The theoretical and planning-related solutions from Unit A should be adapted for the stakeholder dialogue in view of these factors. Accordingly, the diagram of Unit B also mentions all decisive steps of the stakeholder dialogue planned for the line construction project.

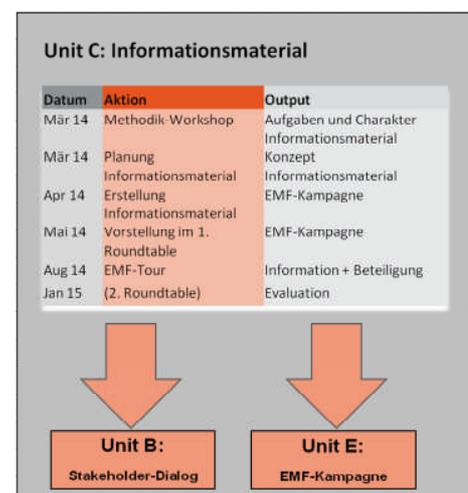
It is also likely, however, that BESTGRID's addressing of an important question from citizens and residents will be received in a positive light, as this creates the expectation that the questions and concerns raised will be gone into in detail. This will be the objective pursued by Unit B in preparing BESTGRID for the communication with stakeholders.

So far, the stakeholder mapping and the approaching stakeholder dialogue have indicated no special challenges with regard to the EMF theme. As the information meetings for citizens still need to take place, this is to be expected. The information scenario follows the top-down example previously given. The licensing authority has already been informed. The Ministry for Economic Affairs of Brandenburg is a project partner and as such a special case. BESTGRID will also be a subject at the meeting of the joint working group in February 2014.

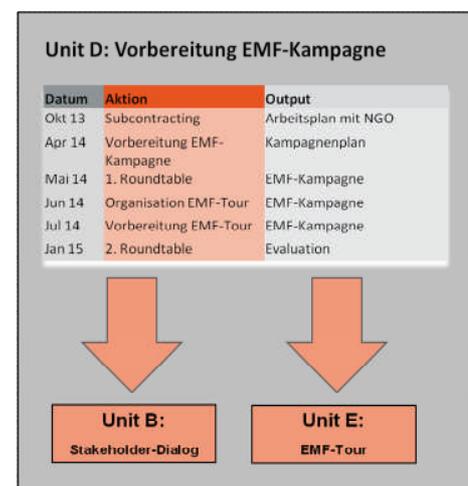
The regional and local disseminators from politics and associations will then be informed extensively on the project in the scope of the first planned round table discussion. Currently, this is planned for May 2014 and will take place as part of the EMF campaign in the scope of Unit D. Until now, the round table discussions are considered a public relations element in the general campaign, which is why they are assigned to Unit D. However, the extent to which this serves the objectives of BESTGRID still need to be finalised with our project partner for the round table discussions, the German environmental organisation Deutsche Umwelthilfe.

Unit C performs all the work with regard to information material needed for the work package. In the first place, this means handouts, brochures, diagrams and backdrops with material that help understand the correlation between electric and magnetic fields and enables people to manage risks in a productive manner. This includes flyers, brochures and possibly film clips and scale models. The method workshop with experts should provide important impulses in this regard.

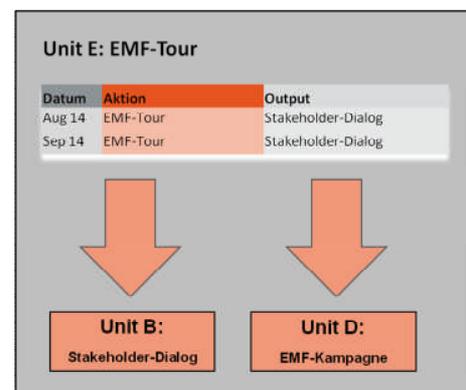
At the workshop, existing material will also be reviewed. Later on, this material will be planned and also produced where possible or needed.



Unit D is responsible for the organisational and strategic preparation of the actual EMF tour, which is planned for the summer of 2014. This also includes both planned round table discussions, during which the stakeholders are informed on the preparation of the EMF tour and the preliminary work, or during which an evaluation will be made. At the first round table meeting, the information material designed so far will be presented in draft form and discussed. The organisation of and logistics for the tour with the mobile information office are also prepared by Unit D.



With **Unit E**, the preliminary work from the other work units reach their targets in August and September of 2014. Information material, stakeholder dialogue, campaign planning and methodology discussion can be maintained in the scope of the xx ports of call of the EMF information tour. The tour will certainly cover other topics in addition to the emission theme and serve to provide general information on the state of the federal sector planning regarding the line construction project. As a concept, however, it will offer the same content to media and citizens alike. This needs to be tested in practice and assessed (see also action plan 2).



The design and layout of the mobile information office are determined by the numerous specific local conditions that are to be expected. That is why at this point, no final decision can be made. It will remain an exclusive point of discussion with the project partners (Deutsche Umwelthilfe, JIASA, Germanwatch and NABU Deutschland), the external experts and, last but not least, the external stakeholders (the participants of the first round table meeting). The following aspects are nevertheless to be respected during conceptualisation:

- Constructional requirements are
 - Sufficiently large for several communicators and discussion partners.
 - Sufficiently small for the smaller towns the mobile information office will visit.
 - Quick assembly and disassembly and easy to transport.
 - Suitable for surfaces of varying stability and different weather conditions (shelter from rain and sunshine for a sufficient number of visitors).

- Adaptability to changing locations with a different layout.
- Possibility to move the office inside.
- Communication requirements are
 - Not too expensive to avoid negative responses (e.g. intimidation effect).
 - Flexible for the storage of material and its quick availability during discussions.
 - Multiple discussions have to be possible at the same time, without mutual interference.
 - Friendly and reserved but recognizable branding.

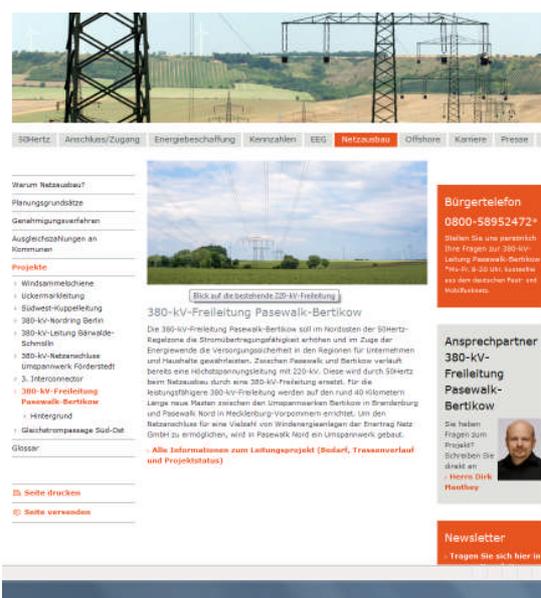
V. Media relations and round table events

50Hertz completely integrates BESTGRID and the work package in the external communication measures and the press and media activities. With a view to complete transparency, cooperation with BESTGRID - as well as the cooperation in the scope of the Renewables Grid Initiative - is mentioned on the company website. Furthermore, the possibility should be considered that the press and media activities planned for the line construction project will also direct the attention of regional and local media towards BESTGRID. The details on how information is provided, are decided in the scope of the rest of the project (see above).

For line construction projects, the online information is categorised under Grid Extension. On the main page of this section, the cooperation within the framework of BESTGRID is already apparent. Further details on communication measures will then be published on the specific project website. The project website for the 380 kv overhead line construction project Bertikow-Pasewalk has been online since September (see screen shot to the right). The mention of participation in BESTGRID has been online since then as well and is currently being reworked for the last time.

The functions of the website - newsletter, hotline, contacts, news - are also used to report about BESTGRID in the scope of the determined communication strategy.

The project communication also systematically integrates press and media activities in the communication strategy. In the scope of the first public events (route corridor workshops) in March 2014, a press meeting is planned in advance to provide regional and local media with elaborate information on the line construction project and the prepared workshops (the pictures on the next page show examples of a parallel project).



The workshops are expected to discuss the route corridors in the federal sector planning first. Should questions pop up about electromagnetic fields, reference will be made to the planned information campaign on this subject. In addition, the workshops also want to enter into discussion with citizens and disseminators through the necessary and requested process of public information. In this regard as well, an explanation of the planned information campaign is likely to be useful.



Both round table meetings mainly serve three purposes:

1. They bring together the most important regional and local disseminators.
2. They serve to fine-tune the details of the EMF tour and open doors at local authorities for the future organisation of on-site events in the municipalities.
3. They gather feedback and bundle information from the region where the line will be constructed in a timely manner.



The German environmental organisation Deutsche Umwelthilfe (DUH) is a BESTGRID partner and will help prepare the essential content for and moderate both workshops. This is of great assistance as the DUH has a great deal of experience with stakeholder dialogue concerning the grid expansion. In this context, they have thoroughly studied the theme of electromagnetic fields. As such, it can act as an independent and neutral party at the round table meetings. As a competent partner, it is also able to moderate these meetings, providing expertise as well as contributing to their success. 50Hertz expects that this cooperation will also deliver helpful advice on the concept of the tour and the identification of the stakeholders to be involved.

Deutsche Umwelthilfe can decide the specific manner and form in which to do this. The details will be defined depending on the further development of the work package's content. Obviously, in a project

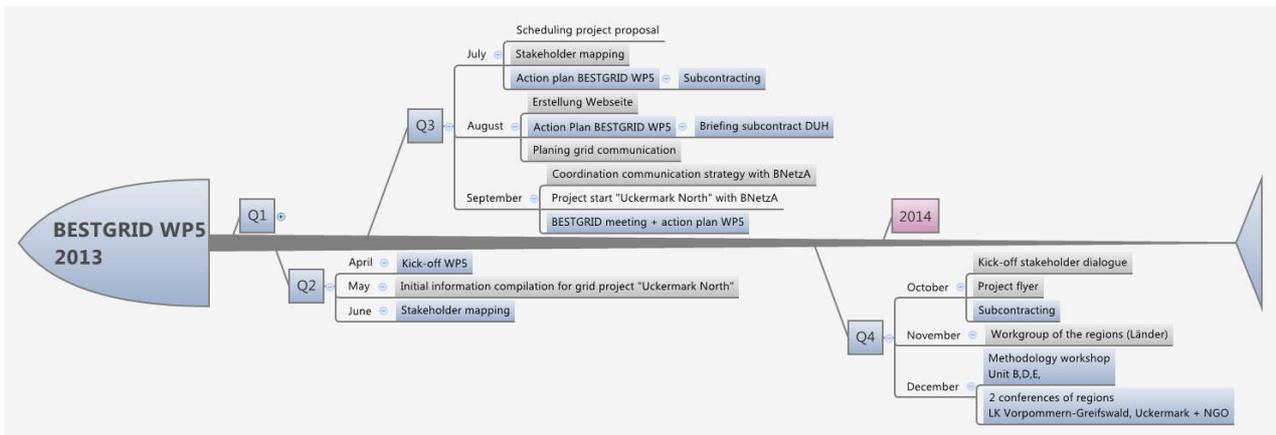
with this many partners, the content should be defined as unanimously as possible. Otherwise cooperation would be limited or even non-existent.

Aside from the objectives of both round table meetings mentioned above, the following absolutely needs to be realised first:

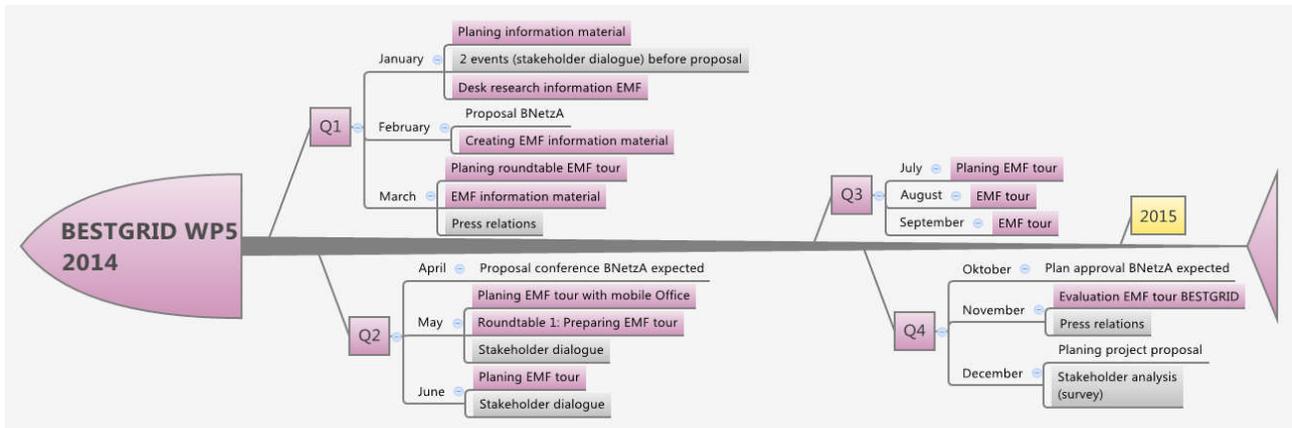
- The campaign and the planned information materials need to be presented.
- An agreement needs to be reached on the strategy and implementation of the campaign
- Suggestions need to be made for the further integration of the stakeholders invited to participate in the campaign.
- Important disseminators and decision-makers as well as regional experts and, when applicable, representatives of action groups need to be brought together.

VI. Roadmap Overview

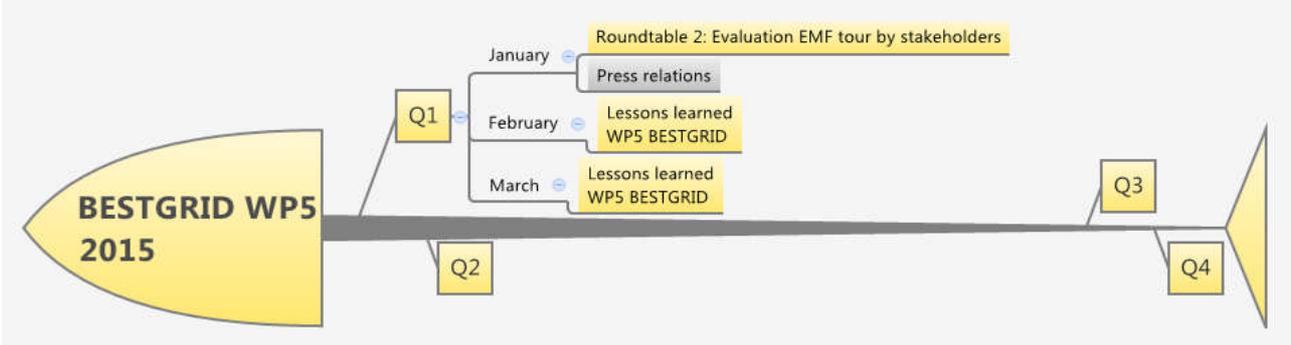
2013



2014



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380 - kV overhead line Bertikow-Pasewalk

Pilot project for BESTGRID



Action plan 2 – work package 5 (Deliverable 5.6.)

Contact details:

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380 kV Bertikow-Pasewalk - pilot project for BESTGRID Action plan 2 for work package 5 (Deliverable 5.6.)

50Hertz is the transmission system operator for north-eastern Germany. It operates a transmission grid at voltage levels of 220 and 380 kV with a total line length of nearly 10,000 km. Both in terms of surface and line length, this corresponds to one third of the total high voltage grid in the Federal Republic of Germany. (Section 1.5.1)

The north-eastern part of Germany is one of the regions playing a major role for the implementation of the German energy transition. With its offshore installations and windswept coastal area and lowlands, it delivered about 40 per cent of all installed wind capacity in Germany in 2012. As a result, the region is a big exporter of electricity generated from renewable sources within the German market. (Section 2.5.1)

Since 2013, the Bertikow-Pasewalk 380 kV overhead line construction project has been part of the Federal Requirement Plan Act (project no. 11) and was confirmed again in 2014 by the Federal Network Agency in the 2013 grid development plan. As such, the project is one of the first authorisation procedures to be carried out with the Federal Network Agency acting as the licensing authority for a project affecting several states. It is the first three-phase current project from the Federal Requirement Plan Act to be subjected to the approval procedure as laid down in the Grid Expansion Acceleration Act (NABEG) of 2011. This makes it a pilot project for more involved public participation in the procedure.

This action plan 2 describes the approach for stakeholder communication as conceived by 50Hertz for the Bertikow-Pasewalk 380 kV overhead line construction project. Three aspects are of particular importance:

1. New elements of the NABEG need to be converted into communication measures.
2. 50Hertz is currently adapting the concept of informal public debate at the earliest possible stage to the changed framework conditions.

3. These communication measures, as well as the communication concept of informal public debate in general, are complemented and adjusted in close cooperation with the Federal Network Agency.

I. Background

50Hertz already has many contacts with professional and political organisations within its control area. Since 2012, these contacts are being complemented with specific political and social dialogue on the project communication and public participation themes.

- In 2012, several meetings and consultation rounds were held with the Ministry for Economic and European Affairs (MWE) of Brandenburg. In March, for example, there was a joint meeting on public information regarding the planned Uckermark line and a visit by the Minister to the underground high voltage line in Berlin (an existing 380 kV cable connection).
- In 2013, all important ministries of Brandenburg and the parties represented in the Brandenburg State Parliament were informed on 50Hertz's communication approach during a series of stakeholder discussions.
- In 2013, MWE and companies from the Brandenburg energy industry started a discussion round titled "Fachforum Akzeptanz" (Expert Forum on Acceptance), in order to further specify the fourth pillar of the state's energy strategy - acceptance. The participants included four affected ministries (Internal Affairs, Infrastructure, Environment, Economy) as well as the most important state authorities and the environmental associations and action groups. The discussion round was concluded with a joint conference on the theme in August 2013.
- In 2013, 50Hertz and the Minister of Economic Affairs of Brandenburg, Ralf Christoffers, signed a joint agreement on early informal public participation in Brandenburg.
- In 2013, 50Hertz participated in the consulting rounds of the state's advisory council on energy, which the Minister of Energy of the state of Mecklenburg-Western Pomerania, Volker Schlotmann, had organised, and contributed to the recommendations.

Before the adoption of the Federal Requirement Plan Act, 50Hertz had established contacts with the spatial planning authorities of both federated states regarding the planned construction of the overhead line in replacement of the old line. The object of study was the possibility of dropping the spatial planning procedure for the project, as the overhead line would run parallel to the existing line and the corridor had therefore already been included in the planning. Both state authorities declared in the spring of 2013 that they did not deem the spatial planning procedure necessary and that the plan approval procedure could be carried out immediately. These decisions were rendered ineffective, however, when the authority was transferred to the Federal Network Agency. For that reason, 50Hertz is currently preparing the federal sector planning, which is similar to the spatial planning procedure.

Both regions - Brandenburg and Mecklenburg-Western Pomerania - are excellent locations for wind power stations. Both state governments have developed an extensive development programme for renewable energy sources. Brandenburg is currently designating appropriate areas for wind energy development in several planning areas. The municipal authorities are also involved in this process. In Mecklenburg-Western Pomerania too, the objective is to involve the municipalities in the construction of wind turbines as closely as possible. Furthermore, large photovoltaic plants already exist in the Pasewalk area and additional ones are planned. The region is used mostly for agriculture, environmental protection interests are only affected at the edges of the survey area.

Apparent conflicts of interests that might arise in relation to line construction, cannot be determined with absolute certainty at this point. Stakeholder research will focus on the following aspects:

- Competition with wind turbines: the possibility cannot be precluded that the areas considered for the route are also used or planned for wind power stations.
- New mayoral election for Pasewalk: the recently elected mayor of the city of Pasewalk passed away. A new mayor will therefore be elected in March 2014. We are currently assessing to what extent the project will become a local electoral theme.
- Brandenburg State Parliament elections: in autumn 2014, there are State Parliament elections. It is possible that the energy transition will play an important role during these elections and that the line construction project will cause controversial debate. The theme can be brought up both on the federal, state or local level.

- Bird protection: at the edges of the survey area, bird protection areas are also included in the ellipse. Depending on the exact course of the route, natural conservation interests can ultimately be affected more strongly.
- Agriculture: the land within the survey area is mostly used for agriculture. Farmers usually want to limit the restrictions on the use of their land to an absolute minimum. This concerns the loss of land to tower positions, line spans and damage to the soil or crops during the construction phase. Furthermore, farmers are also afraid to lose land to compensation measures imposed by landscape and nature conservation law.
- Direct local effects: in a small number of locations (e.g. Dreesch in the Grünow district), the old line route runs close to residential areas, some of which were built near the existing route at a later time. Here, different interests with regard to an altered line route need to be taken into consideration.
- Disadvantage due to the Uckermark line: the 380 kV overhead line between Bertikow and Pasewalk can be considered a continuation of the Uckermark line (between the substations of Bertikow and Neuenhagen bei Berlin). This line, which as part of the Power Grid Expansion Act (EnLAG) has been the subject of an approval procedure since 2006, has caused a serious conflict with representatives from Uckermark and Barnim. It is unclear whether this conflict will also spread to the new project.

25/01/2014

II. Implications for the permitting procedure

The steps for early public information as stipulated in the Grid Expansion Acceleration Act (NABEG) and the approach for the determination of alternative route corridors offer a good basis to hold a discussion on the best alternatives for the trajectory of the overhead line to be constructed. In any case, the ellipse (the survey area) is too small to realistically allow for wide corridors with heavily divergent trajectories of up to 15 kilometres in width, in which an alternative corridor of 1 kilometre in width can subsequently be identified. The alternatives will in all likelihood run along the possible corridor variants and, later on during the plan approval procedure, along alternative routes.

Instruments to this end are the "model application (part 1 and 2)" agreed between the transmission system operators and the Federal Network Agency in the scope of the planning as well as the public debate held on these data. This dialogue with citizens needs to be held both as an informal and a formal part of the procedure. One important challenge in this context is to explain the procedural differences to the affected citizens and to guide them through the complex procedure.

The integration of BESTGRID is another challenge for communications. Careful consideration needs to be given to when, where and how this project can be made transparent for the citizens. As the public debate in the general context of the energy transition is characterised by considerable distrust, there can be unfavourable consequences when people realise that their behaviour is being studied, analysed and assessed. This can have a negative effect on the project and the planned project communication. This issue will be discussed with the BESTGRID partners, including Deutsche Umwelthilfe, NABU and RGI.

III. The communication objectives of the early informal dialogue with citizens

The objectives of the early informal dialogue with citizens are easy to formulate and obvious. From a communications perspective, however, they are difficult to realise given the initial situation. These framework conditions include:

- The communication content (line construction project) is often met with disinterest until people realise that they are directly affected. This makes it difficult to attract attention to the theme without exciting emotional reactions.
- The procedure and the influence options are complicated and punctuated with terms from administrative law. This might easily lead to misconceptions by local residents and other affected parties.
- Early information is inherently incomplete information. Citizens often want to immediately know the exact route trajectory. The federal sector planning, however, only performs an abstract search for a corridor. The explanation that the exact route is only determined at a later stage, might lead to distrust and the reproach of dishonesty and piecemeal tactics. Lack of understanding in the processes creates the public opinion that everything has been agreed on and determined in advance.
- Important facts: different and highly divergent information circulates on the effects of overhead lines, which is difficult for individuals to assess and sift through. This makes it more difficult for them to decide which interpretation can be trusted.
- Time-consuming procedure: the procedure covers a long period of time. For laymen, it is hardly possible to maintain an overview without spending a great deal of effort. This creates uncertainty as to the possibilities to influence the procedure and the exact decision-making processes.
- Early information is not the same as involvement in decision-making. The inaccurate definition of early "public participation" obscures the fact that there are legally well-defined paths for formal influence on the procedure. Instead, people have the impression that by participating in the

informal communication measures, they can influence the decisions on the line's trajectory. When such false hopes are dashed, this can cause frustration and anger.

The objectives of project communication to create clarity in such matters - at the early stage of the authorisation process - in the scope of the federal sector planning should therefore be as follows:

- Announcement of the project and explanation of possible effects
- Information on the procedure and the relevant meetings and events of particular importance
- Explanation of the "room for manoeuvre" at the disposal of citizens and supporting them in making use of this margin.
- Establishment of information channels for the affected stakeholders, enabling a continuous and objective exchange of information.
- Communication of important basic technical information to make it possible for all stakeholders to assess the project.

The rule of thumb is that the goal of communication in the early stage preceding the formal start of the procedure should be to provide information in such a way that all relevant groups and affected parties are represented at the project conference, where they will discuss all relevant themes. Their findings will afterwards be included in the study scope in order to complete the application pursuant to §8 of the NABEG and as such create a good basis for the decision by the licensing authority.

In the early stage, communication will focus on the disseminator target group. The general public, on the other hand, will be involved both before and after the project conference and after the determination of the study scope.

IV. 50Hertz's project communication principles and the role of the cooperating NGOs

In the scope of the project, 50Hertz will work together with various NGOs, including Deutsche Umwelthilfe and NABU Deutschland, who have already gathered extensive experience in the debate on the German grid development. Other partners will be involved in the course of the process.

For 50Hertz, this is a good opportunity to check whether the internal processes function well in view of the principles formulated above or the communication objectives defined earlier in the document. Identifying stakeholders provides a change in perspective. Only in this manner can affected parties and assessment criteria be understood to the fullest. All participants in the grid development debate should therefore understand that this goal can only be achieved through cooperation and mutually growing trust as well as trust in each other's competences. That is why the cooperation with Deutsche Umwelthilfe, NABU and others serves two objectives:

1. This cooperation allows us to verify whether all interests are being considered.
2. Such a total view can only be achieved if all partners' perspectives can be taken into account.

This will result in a profitable process of mutual acknowledgement.

50Hertz adopted the following principles:

- to make its actions as transparent as possible,
- to be open and willing to engage in dialogue in doing so,
- to contribute to the search for useful instruments for early dialogue with citizens and
- to communicate not only in response, but also actively whenever possible.

In this manner, it should be possible to shape the social debate on early information and participation in such a way that the planning processes are again perceived as reliable and legitimate and that they can be concluded more quickly, more efficiently and certainly with less conflict.

In light of this basic understanding, BESTGRID offers 50Hertz an institutional framework in which it can work together with prominent organisations from civil society to achieve this goal.

As a nature conservation organisation firmly established on the local and regional level, **NABU Deutschland** can help fine-tune the perspectives that can be deduced from the nature conservation topics. This will allow us to discover whether

- a direct involvement in the project influences the specific approach to environmental issues,
- misconceptions can be uncovered in dialogue with environmental associations and representatives of environmental interests,
- basic attitudes can be given better consideration when assessing factual issues,
- communication problems can be avoided when disclosing information,
- common ground for early cooperation can be uncovered which could not be identified without the contribution by NABU.

In this sense, 50Hertz seeks to use the BESTGRID context to give the representatives of NABU Deutschland as much insight as possible into its own activities in order to achieve these goals. This includes the participation in team discussions to make the correlation between studies, legal matters and communication challenges as transparent as possible.

Deutsche Umwelthilfe has already had the opportunity to gather a lot of experience in presenting grid development projects and has a good understanding of the controversial factual issues concerned in the grid expansion. One particular issue is that of electromagnetic fields. In the scope of the pilot project, the content of communications on this subject will be improved even further. This requires a more active involvement of regional and local stakeholders in order to have them support this project. Moreover, they should also benefit from the results. As a result, Deutsche Umwelthilfe has three essential tasks:

1. It assists in the detailed planning of the project's content and preparation as a supervisor and advisor.
2. It supports 50Hertz in organising the two round table meetings with stakeholders on the subject of electromagnetic fields.

3. It will moderate both these meetings, which are intended to determine the themes for the preparation and assessment of the planned campaign.

The initial situation and five working units for the EMF campaign are described in detail in action plan 1. The challenges described here for Deutsche Umwelthilfe mainly concern working units A (problem outline and methodology), B (stakeholder dialogue) and D (preparation of the EMF campaign). Support by units C (information material) and E (roll-out of EMF tour) is possible and useful to properly prepare the presentation.

So far, the stakeholder mapping and the approaching stakeholder dialogue have indicated no special challenges with regard to the EMF theme. The regional and local disseminators from politics and associations will be informed extensively on the project in the scope of the first planned round table discussion. Currently, this is planned for May 2014 and will take place as part of the EMF campaign in the scope of Unit D. So far, the round table discussions are considered a public relations element in the general campaign, which is why they were assigned to Unit D.

The first round table meeting is intended to achieve the following objectives:

1. Explanation of the project and possible support of the organisation by the stakeholders
2. Explanation of the central theme
3. Presentation of the information material and the overall planning of the EMF tour
4. Gathering feedback and if necessary adjusting the project

To conclude the project, the second round table meeting should present the findings to the stakeholders. At this meeting, the cooperation experiences will also be discussed. The meeting is planned for January 2015.

V. Stakeholder mapping

Stakeholder mapping is the first step of communication analysis for project communication. The group of project-relevant stakeholders can be divided in multiple subgroups of institutions and persons who assume different roles and role groups in the scope of the planned project³:

7. Federal and state authorities competent for authorisations and procedures
8. Energy policy decision-makers and disseminators
9. Representatives of public interests (competent authorities, environmental associations, operators of infrastructure facilities, etc.)
10. Local and regional disseminators from the political world, administration, associations, the economy, civil society
11. Media
12. Local residents and other citizens

In the general project communication strategy, the needs assessment and approval process is split up into different phases, which are all assigned different target groups, formal communication events within the official procedure and communication measures (see diagram below).

The project-related stakeholder analysis should then verify the timing and content of these measures, supply directions for their modification and determine the need for project-specific measures.

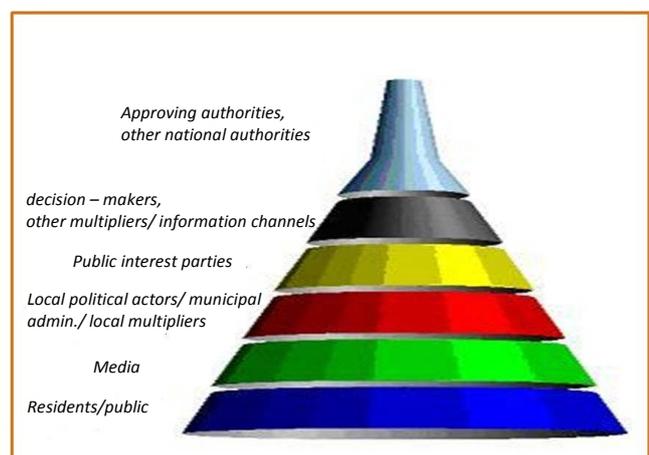
Stakeholder mapping is conceived as a longer term process, which is by no means concluded when the discussions with stakeholders commence. Rather, the list of stakeholders is gradually expanded,

³ Role group in this context signifies that institutions can represent different interests and therefore take up different positions with regard to the project and the course of the procedure. A classic example is a District Administrator, who is a competent authority, a representative of the public interest and a political decision-maker all at the same time.

partly based on the discussion partners' recommendations, in the scope of the stakeholder discussions.

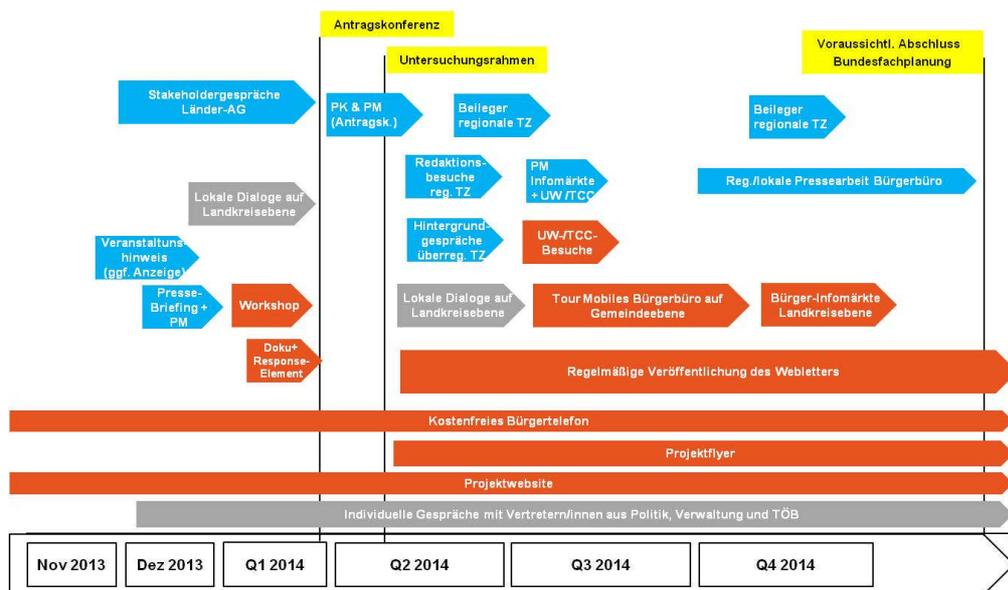
After the adoption of the federal requirement plan act in the summer of 2013, 50Hertz began making preparations for the approval procedure to be carried out by the Federal Network Agency. This was also the starting shot for stakeholder mapping. The following steps have already been taken or are still ongoing in the scope of further stakeholder management:

- 2012 - Contact with the spatial planning authorities of Brandenburg and Mecklenburg-Western Pomerania.
- 09/2013 - Contact with the licensing authority, in this case the FNA, with the creation of the competent licensing unit N13. Monthly coordination sessions have taken place since then.
- 09-10/2013 – Stakeholder mapping of levels 1-4 (state authorities, energy policy disseminators at state level, representatives of public interests, local administration.
- 11/2013 - Appeal to state governments (MWE Brandenburg and Ministry for Energy of Mecklenburg-Western Pomerania) and to the FNA to constitute an informal joint working group for the 380 kV overhead line.
- 12/2013 - Individual contact with stakeholders at levels 1-4 with personal mailing.
- Since 01/2014 - Meetings and stakeholder talks at the state and district levels.
- 02/2014 - First meeting of the joint working group.
- 03/2014 - Contact with local and regional media.



- 03/2014 - Information to the general public and local residents and contact through two regional evening meetings with route corridor workshops.

The following schematic gives a final overview of the communication planning with a focus on the year 2014.



VI. Additional communication measures in the stakeholder dialogue

In the further course of the procedure and dialogue with the stakeholders, a specific need for additional communication measures may develop. This essentially depends on which needs are developed by citizens and the other organisations. As the project developer, 50Hertz cannot define and finalise the necessary communications from the very start, nor does it want to. This would only create additional tensions, as the dialogue partners would feel patronised. Ultimately, no adequate communication measures would result from such an approach. It is far more important to discuss in mutual consultation which needs are present and to subsequently determine together which measures should be taken and which formats should be used for communication.

This does not mean that 50Hertz wants to interfere in everything. Each side should share its position and any further steps should be taken together insofar as possible. Being the project developer, however, 50Hertz bears particular responsibility for the process. Reserve in communications is therefore only possible to an extent that does not strategically question the project communication principles. 50Hertz has always strived for active communication that promotes action and imposes transparency as a basic attitude.

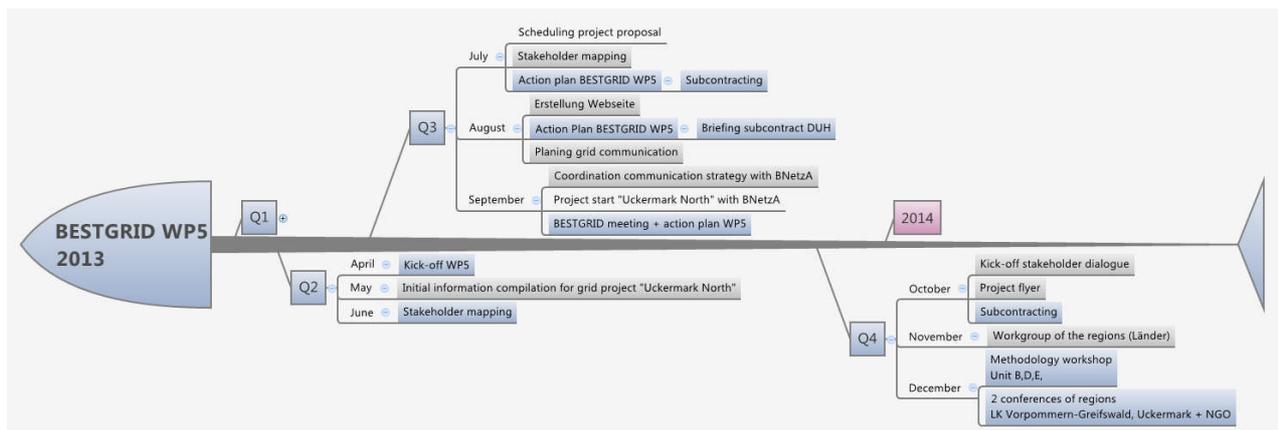
Especially in the phase following the project conference, the probability increases that

- the local need for explanation of the current planning and the further procedure will increase,
- individual themes will receive particular focus and that special formats and measures will need to be developed or that specific dialogue groups will need to be created that want to or have to continue work on a theme,
- especially in the follow-up of the EMF tour in the late summer of 2014, additional questions and needs will surface that require a response by 50Hertz.

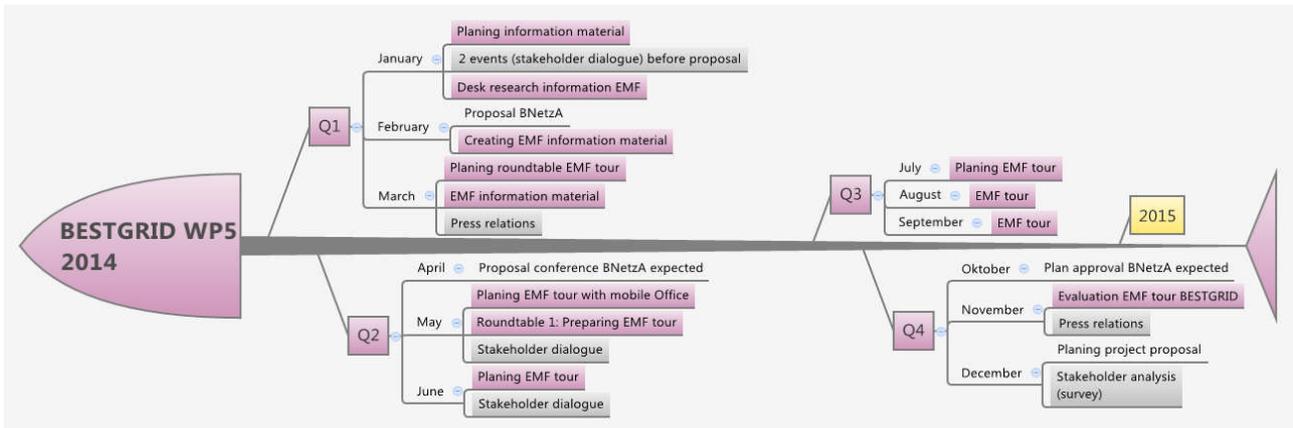
VII. Roadmap overview

In conclusion, the following year schedules show the measures of the EMF campaign (in colour) and the stakeholder dialogue (in grey). Both approaches are integrated in a total communication approach. BESTGRID will adapt to the timing and formal framework of the line construction project and its authorisation process. If not, the EMF campaign will not function as an integral element of project communication, but rather have counter-productive effects. That is, of course, not our intention.

2013



2014



2015

