

DRAFT from Nov 27, 2018

Delegation to Germany

Flexibility options in the distribution grid – Exchange between the US and Germany

May 6 – 9, 2019

Monday, May 6, 2019: Introduction & Meeting with Government Agencies

Berlin

Time	TOP	Location/Speaker
08.30 – 09.00	Registration	Venue: Federal Ministry for Economic Affairs and Energy (BMWi) Scharnhorststraße 34-37 D - 10115 Berlin
09.00 – 09.15	Welcome and introduction to the week's program and to the energy dialogue program between Germany and USA	Adelphi www.adelphi.de Renewables Academy (RENAC) AG www.renac.de
09.15 – 09.45	Introduction of participants of delegation U.S. participants present their role, background & their particular interest in the program and questions they hope to get answered (~1 min/each)	Participants of the delegation
09.45 – 10.00	Welcome by the Federal Ministry for Economic Affairs and Energy (BMWi)	German Federal Ministry for Economic Affairs and Energy (BMWi) www.bmwi.de
10.00 – 11.00	Introduction to the German Energiewende <ul style="list-style-type: none"> Background and history, targets and status Germany in the context of the European energy transition: power system structure and actors Challenges arising with higher shares of RE - flexibility needs of the power system and high level of electricity supply security Digitalization - smart energy systems and cybersecurity Economics and investments in the power system Q&A, open discussion 	German Federal Ministry for Economic Affairs and Energy (BMWi) www.bmwi.de
11.00 – 11.30	Coffee / tea break *	

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11.30 – 01.30	<p>Overview of the current status of power market policy and design in Germany:</p> <p>Electricity market design</p> <ul style="list-style-type: none"> • The European electricity market "target model" • Unbundling of grids and generation • Markets for electricity: financial, day-ahead, intraday, balancing power • Balancing responsibility • Flexibility and generation adequacy <p>Renewable power support schemes</p> <ul style="list-style-type: none"> • Feed in tariffs • Auctions • Components of the electricity price for end consumers and industry (tariff design, fixed/stand-by charges) • Prosumer and self-consumption <p>Grids</p> <ul style="list-style-type: none"> • Grid congestion and grid expansion • Congestion management: redispatch and curtailment • Locational incentives for generation <p>Q&A, open discussion</p>	<p>Adelphi www.adelphi.de</p> <p>The Regulatory Assistance Project www.raponline.org</p> <p>Agora Energiewende www.agora-energiewende.de</p>
01.30 – 02.30	Lunch break at BMWi *	
02.30 – 03.30	<p>Role of the Regulator</p> <ul style="list-style-type: none"> • Insights on grid regulation and policies in the context of the Energiewende • Regulatory challenges arising with energy transition towards higher shares of volatile RE • Barriers and incentives of regulatory framework for more power system flexibility to secure supply of electricity • Q&A, open discussion 	<p>The Federal Network Agency (BNetzA) www.bundesnetzagentur.de</p>
03.30 – 04.00	Presentation of delegation trip agenda for the week	<p>Renewables Academy (RENAC) AG www.renac.de</p>
04.00 – 06.30	Free time	
06.30 – 08.30	Welcome Dinner *	

Tuesday, May 7, 2019: Stakeholder Meetings

Berlin

Time	TOP	Location/Speaker
09.00 – 10.30	Meeting with VKU: DSOs as system managers of the energy transition <ul style="list-style-type: none"> • “New” role of DSOs in the Energiewende • Interface between TSO and DSO Networks • Digitalisation • Sector coupling (heat, cooling and E-mobility) • Q&A, open discussion 	German Association of Local Utilities (VKU) www.vku.de
10.30 – 11.00	<i>Coffee / tea break *</i>	
11.00 – 12.30	Meeting with DSO(s): German DSOs in the Energiewende <ul style="list-style-type: none"> • Company strategy • Grid regulation • Economic grid optimization (grid infrastructure and grid fees) • Demonstration and pilot projects to support the energy transition • Digitalization, sector coupling • Q&A, open discussion 	Innogy SE www.innogy.com ARGE Netz www.arge-netz.de/ Bayernwerk Netz GmbH www.bayernwerk-netz.de/ / Stromnetz Berlin www.stromnetz.berlin
12.30 – 02.30	<i>Lunch break *</i>	
02.30 – 04.30	Meeting and site visit: TSO <ul style="list-style-type: none"> • Role and responsibilities of the TSO in the framework of the German Energiewende • Lessons learnt from the perspective of a TSO: <ul style="list-style-type: none"> ◦ Investment in grid infrastructure & grid fees ◦ Grid operation with large amount of weather dependent wind and PV ◦ Power system security ◦ Dispatch strategies & congestion management ◦ Coordination of TSOs with DSOs ◦ Grid extension planning ◦ Economics ◦ Q&A, open discussion • Visit of the reserve control center 	50Hertz „Netzquartier“ www.50hertz.com
04.30 – 05.00	<i>Transfer to hotel *</i>	
05.00 – 05.30	<i>Free time</i>	
05.30 – 08.30	Optional: Guided city tour on foot *	Start: Hotel Motel One
	Dinner to be borne by participants (\$)	

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Wednesday, May 8, 2019 – Stakeholder Meetings & Site Visits

Berlin, EUREF

Time	TOP	Location/Speaker
09.00 – 10.30	<p>Site visit: Guided tour through the EUREF Campus</p> <ul style="list-style-type: none"> • This 5.5-hectare urban quarter is a symbol of the energy transition in Germany and serves as a home base for companies working in the fields of energy, sustainability and mobility. • Ecologically and economically sustainable solutions have transformed the offices and science campus - which by 2014 had already met the German government's climate objectives for 2050 - into a unique European center for innovative forward-looking projects. • Q&A, open discussion 	EUREF www.euref.de
10.30 – 12.00	<p>Electromobility</p> <ul style="list-style-type: none"> • Sector coupling • Electromobility in the Energiewende • Q&A, open discussion 	Ubitricity www.ubitricity.com/ InnoZ www.innoz.de
12.00 – 02.00	<i>Lunch break *</i>	
02.00 – 03.30	<p>Electricity trading</p> <p>Ensuring the security of the system and supply by integrating consumers and networking installations</p> <ul style="list-style-type: none"> • Aggregated energy trading. Efficient, secure & revenue-optimised bundling of the power of decentralized generating plants, prosumers and storage facilities. • Management and optimisation of volatile portfolios, as well as the marketing of the flexibility of decentralised production and consumption systems in a turbulent market environment. • Q&A, open discussion 	energy2market GmbH www.e2m.energy/en
03.30 – 05.00	<p>Virtual Power Plants</p> <p>How to provide flexibility from decentralized assets: Running a Virtual Power Plant in Germany</p> <ul style="list-style-type: none"> • How to efficiently connect power-producing assets from renewable sources such as biogas, wind, and solar with commercial and industrial power consumers and power-storage systems. • Q&A, open discussion 	Next Kraftwerke www.next-kraftwerke.com
05.00 – 05.30	<i>Transfer to hotel *</i>	
	Dinner to be borne by participants (\$)	

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Thursday, May 9, 2019 –Meetings & Concluding Workshop

Berlin

Time	TOP	Location/Speaker
09.00 – 10.30	Meeting with utility New utility business models in the context of the Energiewende <ul style="list-style-type: none"> Success story or stranded investment? How to be economically successful in the energy transition: A look at the EnBW business model Q&A, open discussion 	EnBW www.enbw.com
10.30 – 11.00	<i>Taxi transfer *</i>	
11.00 – 12.30	Storage: Energy storage in the context of the Energiewende <ul style="list-style-type: none"> Energy storage in the context of the Energiewende Q&A, open discussion 	BVES www.bves.de
12.30 – 02.00	<i>Lunch break *</i>	
02.00 – 04.00	Concluding workshop: <ul style="list-style-type: none"> Participants' presentations on lessons learned from meetings & site visits Discussion on Energiewende, power system design and security of supply Potential future collaborations Evaluation of study tour 	Renewables Academy (RENAC) AG www.renac.de
04.00	End of the official program	

Foot note:

* - Arranged and costs covered by hosts

\$ - Costs to be borne by participant

*) Please note: RENAC may change the content of the schedule on short notice.

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