

# BERLIN SEMINAR ON ENERGY POLICY

## Overview and Highlights of Delegation Visit

### June 2016

*Presentation to the Illinois Pollution Control Board  
Brown Bag Lunch*

August 2016



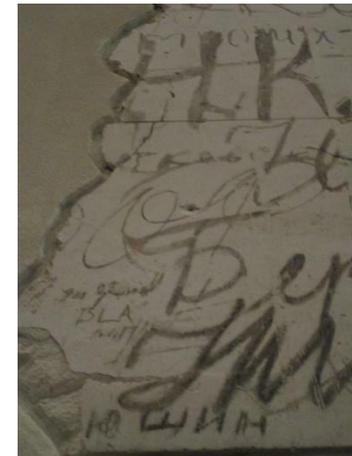
# About the Citizens Utility Board

- Nonprofit, nonpartisan utility watchdog group established by Illinois legislature in 1984 to represent the interests of utility customers, particularly residential and small business customers.
- 30 employees focused on saving customers money and improving utility services:
  - ▣ Utility Bill Clinics and Education Events
  - ▣ Consumer Calculators
  - ▣ CUB Energy Saver
  - ▣ Litigation and Policy at State and Federal Level
- Member and grant supported
- Disclaimer



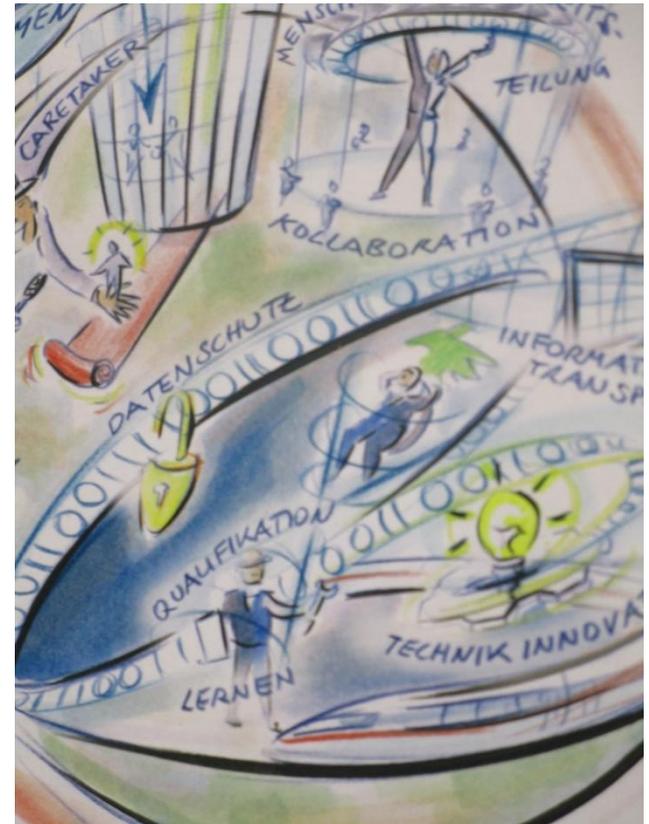
# Overview

- Transatlantic Partnership
  - ▣ Discussion of best practices and opportunities for innovation
  - ▣ University of Minnesota and BMWI
  - ▣ Comparing and Contrasting Experiences of IL, MN and DE
- Delegation Members
- Schedule Highlights
  - ▣ Energiewende Basics
  - ▣ Energy and Transportation
  - ▣ EUREF
  - ▣ Feldheim
  - ▣ Labor and Refugees



# Energiewende

- Timeline: 1990s to 2050
- Political Support
- Comprehensive Framework
  - ▣ CO2 Emission Reductions
  - ▣ Renewable Energy
  - ▣ Nuclear Phase Out
  - ▣ Energy Efficiency



# Energiewende: Targets

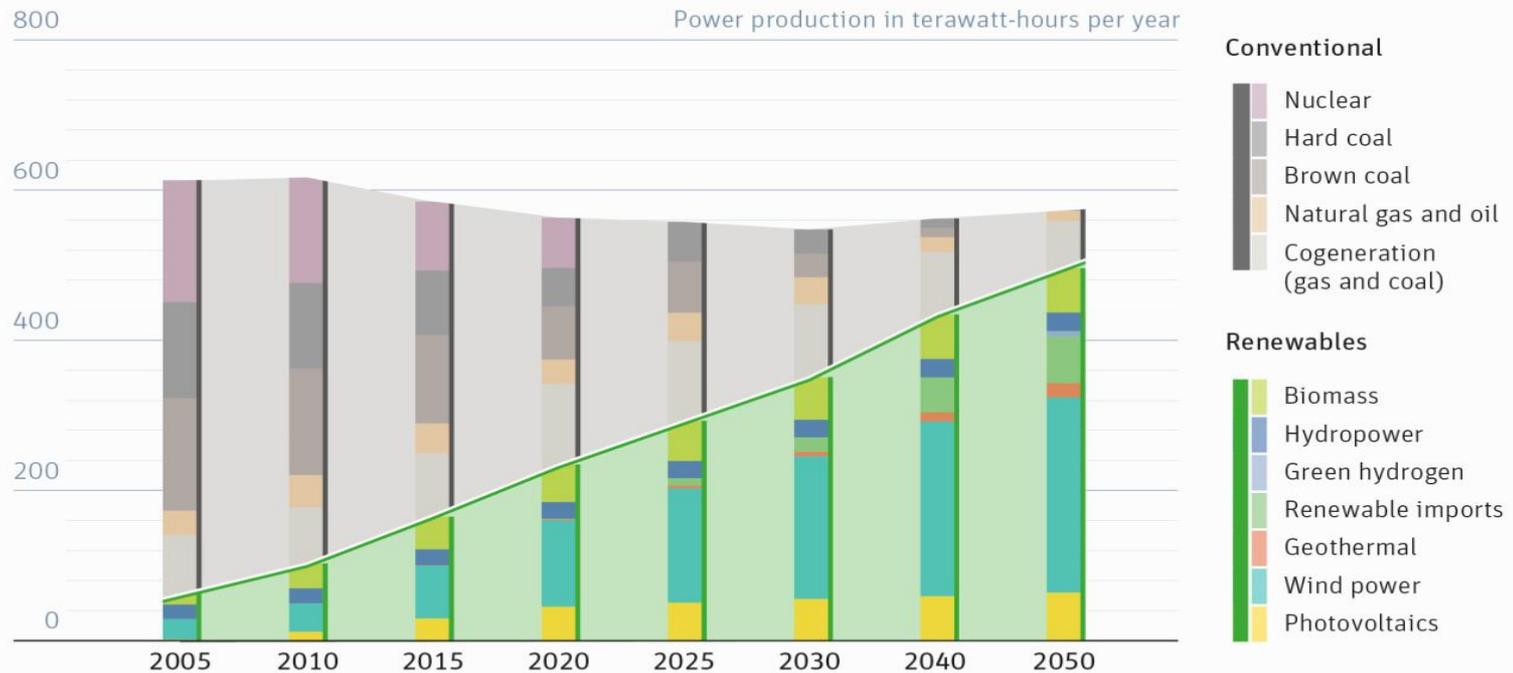
Category	SQ	2020	2025	2030	2035	2040	2050
Greenhouse Gas Emissions	-26.4%	-40%		-55%		-70%	- 80-95%
Renewable Energy (Final)	12.4%	18%		30%		45%	60%
Renewable Energy (Gross)	27.3%		40-45%		55-60%		80%
Nuclear Phase Out	11 units	0 units by 2022					
Energy Efficiency (P)	-9.14%	-20%					-50%
Energy Efficiency (G)	-4.8%	-10%					-25%

# Energiewende: Highlights

## Germany's plan: switch from coal and nuclear to renewables

Electricity generation in Germany 2005-2050, scenario

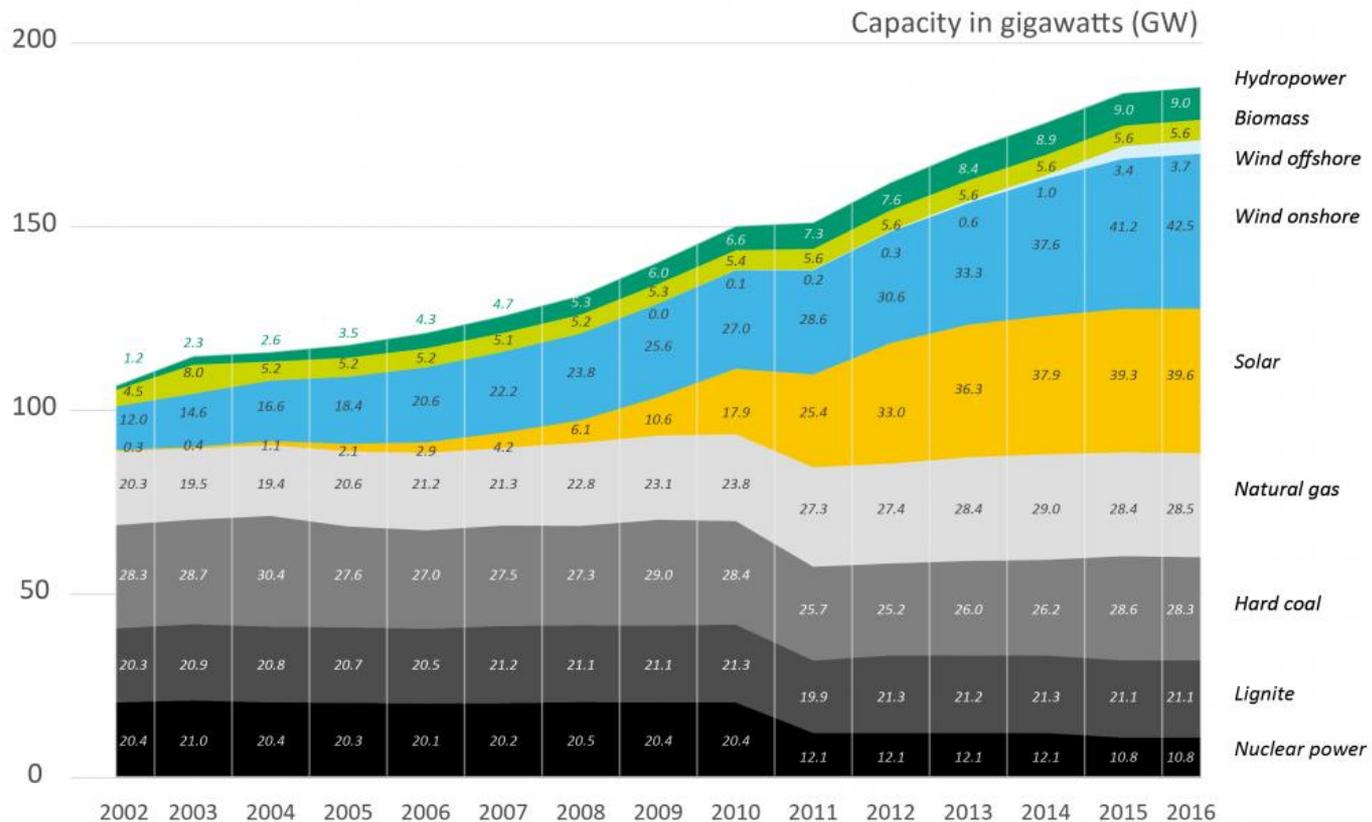
Source: DLR and Fraunhofer IWES



# Energiewende: Highlights

## Installed net power generation capacity in Germany 2002-2016.

Data: Fraunhofer ISE 2016.



# Changing Conditions

- Public Opinion on Surcharge
  - ▣ Transition from Feed In Tariffs to Auctions
- Need for Flexible Services
  - ▣ Balancing Markets Developing
  - ▣ Storage
  - ▣ Demand Side Management
- Energy Efficiency Investments Lagging
  - ▣ National Action Plan (NAPE)
  - ▣ Audits



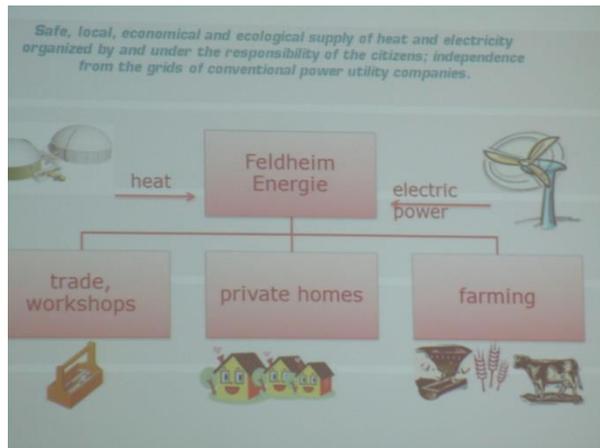
# What Stands Out

- ❑ Holistic Approach to Energy
- ❑ Political Leadership
- ❑ EUREF
- ❑ Citizen Action
  - ❑ Feldheim
- ❑ Balancing Labor Concerns
- ❑ New Political Pressures
  - ❑ Refugees



# Feldheim

- Holistic Energy Solution
  - Wind
  - Biogas
  - Storage
- Citizen Driven
- Closed Loop



# Comparing Transitions

- Political Climate
- Economic Climate
  - ▣ EUREF
  - ▣ Environment
- Energy and Transportation
- EUREF
- Labor and Refugees

