

Capital Market Day >

EnBW Energie
Baden-Württemberg AG



1 October 2014
Frank Mastiaux, Chief Executive Officer





Renewable Energies

- > Renewable Energies Act revised:
 - > Defined RES capacity expansion (e.g. Offshore target 2020 reduced to 6.5 GW)
 - > Auctioning for feed-in tariffs (solar parks in 2015)
 - > Mandatory sale of renewable energy directly to the market (except small-scale RES)
- > Onshore capacity expansion of 1.7 GW in the first half of 2014 exceeds first half of 2013 by 66%. Photovoltaic expansion declines by 44% to 1 GW



Conventional Power Generation

- > Sector continued under pressure (low level market prices and utilization rates)
- > Utilities applied for permission to take 49 conventional power plants off the market
- > Future proceedings in nuclear power under increased debate
- > Pump storage economics: PV additions require shift in business model



Power Grids

- > Network development plan 2014 under way: Necessity for power grid reinforcement (ca. 5.300 km) and power grid expansion (ca. 3.500 km) reconfirmed. Investment of around 21 to 26 € bn in ten years' time required
- > Regional opposition as expected

EnBW 2020 Strategy with two main pillars will remain unchanged



Engine Room of the “Energiewende” System Competence



> Industrial scale



> Enhanced investments in renewable energies and power grid expansion



> Efficient and safe construction and operation of vital energy infrastructure

Customer Proximity Market Orientation

> Smart energy solutions and energy efficiency

> Innovation and new business models

> Partnership models and dialogue

> Stronger focus on business with municipalities to leverage regional base

> Start-up mindset

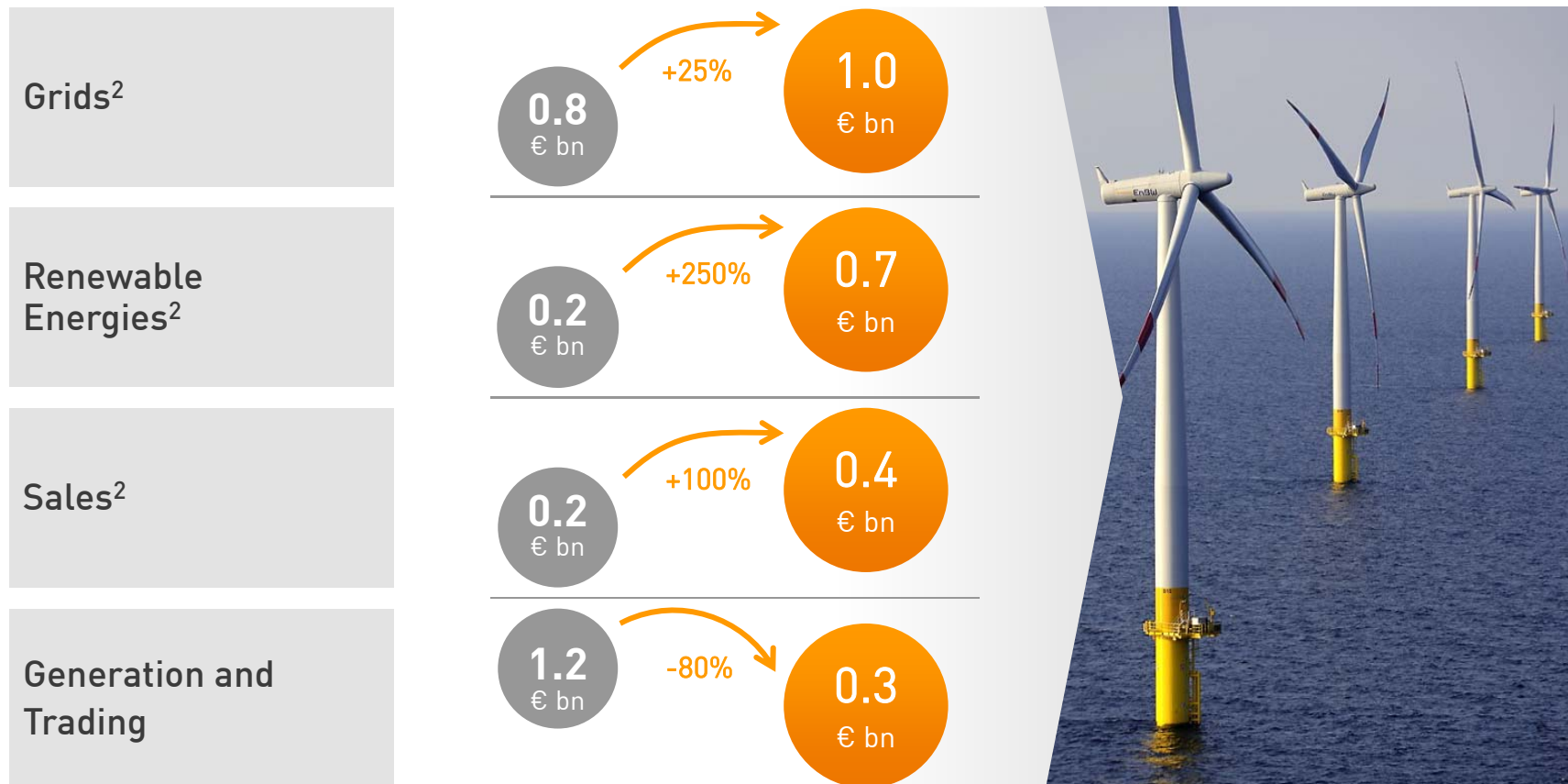


**Performance management, operational excellence,
lean structure and processes, new leadership culture**

EnBW 2020 Strategy: Leveraging the opportunities of the “Energiewende”



LONG TERM OBJECTIVES¹



¹ Figures as of 31.12.2013 ² Strategic growth issues

Our sole focus is consistent delivery of our strategic targets



Strategy & Structure

- ✓ Corporate strategy EnBW 2020 translated into detailed operational plans at business unit level
- ✓ New corporate structure enacted effective 1.1.2014 with significant structural streamlining
- ✓ Next phase of material consolidation of group functions and overheads already under way

Performance & Portfolio

- ✓ Four major areas of focus for further earnings improvement by 2020 in a mid-triple-digit million Euro range
- ✓ Execution on gas strategy by expanding into the gas supply and transmission business (acquisition of 50 % of terranets bw and GVS)
- ✓ Retirement plans for six conventional power plants (about 900 MW) submitted to the Federal Network Agency (BNetzA)
- ✓ Sale of 75%-share of the coal-fired power plant Bexbach to STEAG
- ✓ Sale of non-strategic participation OSD Schäfer (900 employees)
- ✓ Renewable expansion plans well under way (Turkey, Germany Onshore/Offshore)

Strategy in execution



Wind Offshore

- ✓ EnBW Baltic 2 offshore wind farm on track with 12 wind turbines already installed

Wind Onshore

Germany

- ✓ Set-up of a decentralized organization with four additional offices delivered by year-end
- ✓ Project pipeline expanded to 550 MW, more than 2 GW in the screening process

Turkey

- ✓ Start of commercial operation of Balabanli wind farm in July 2014 (50 MW)
- ✓ Initiation of construction of further five wind farms (207 MW total capacity)

Conventional Power Generation

- ✓ Commissioning of coal-fired power plant RDK 8 with world-leading efficiencies

Engine Room of the “Energiewende”



Strategy in execution



Customer Proximity



Customer Business (B2C and B2B)

- ✓ EnBW pushing into energy efficiency market e.g. by 28 energy efficiency networks for industries in Germany

Municipality Sector

- ✓ Extension of concessions in Stuttgart and Heilbronn via new partnership models
- ✓ Operational start of separate entity to consolidate and grow our telecommunications and broadband business aiming at doubling the customer base until 2020

Operations

- ✓ EnBW won five third party businesses for managing two million metering points, moving EnBW to number one service provider in Germany

Innovation Management Agenda

- ✓ Foundation of an Innovation Campus
- ✓ Screening of initiatives under way (e.g. smart street lightning)

Outlook



- › 2015-2017 plan with sole focus on „delivery on our strategy“
 - › Costs and efficiency
 - › Growth agenda
 - › Corporate culture, ways of working
- › Continued effort in improving economics of conventional power business
- › Enhanced focus on portfolio optimization
- › Strong involvement in regulatory redesign discussions at national and federal level
- › Strong push for launch of activities for new products and services at scale



Capital Market Day 2014>

Conventional and renewable generation

EnBW Energie
Baden-Württemberg AG

Dr. Wolfgang Eckert

CFO Generation

1 October 2014



Fundamental and sustained changes in generation and trading environment in Germany require clear and coherent strategic action



Development of wholesale market prices



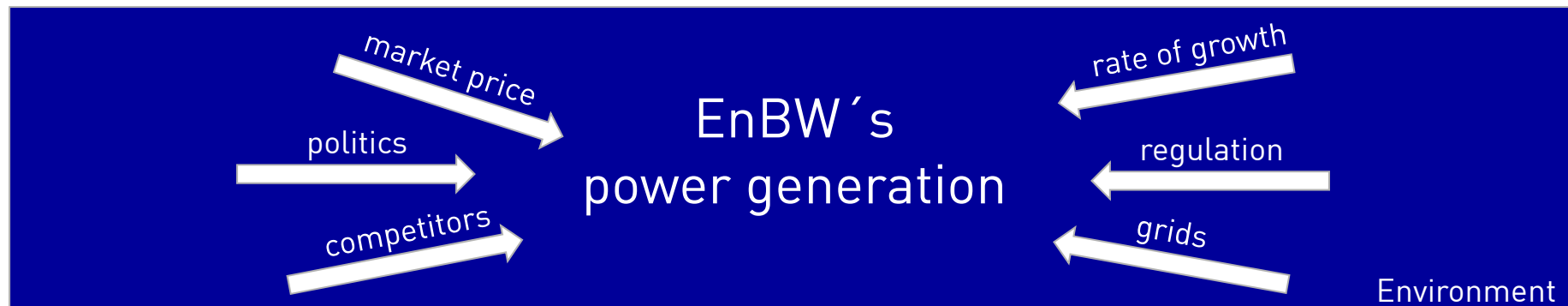
EEX Forward electricity rate 2016:
34,08 EUR/MWH (Date Sep 18th 2014)

Market situation of power generation

- › No significant mid-term recovery on wholesale market prices to be expected
- › Capacity utilization of conventional power plants has declined significantly
- › Overall cost structure of plants burdens p&l
- › Sustained growth in renewable energies lead to capacity substitution away from conventional power

Challenge to improve situation: Expanding into renewable energies, while downsizing the conventional portfolio

Strategic actions within EnBW's power generation



Strategic actions

conventional

Restructuring / optimization of cost structure
Decommissioning of plants

renewable

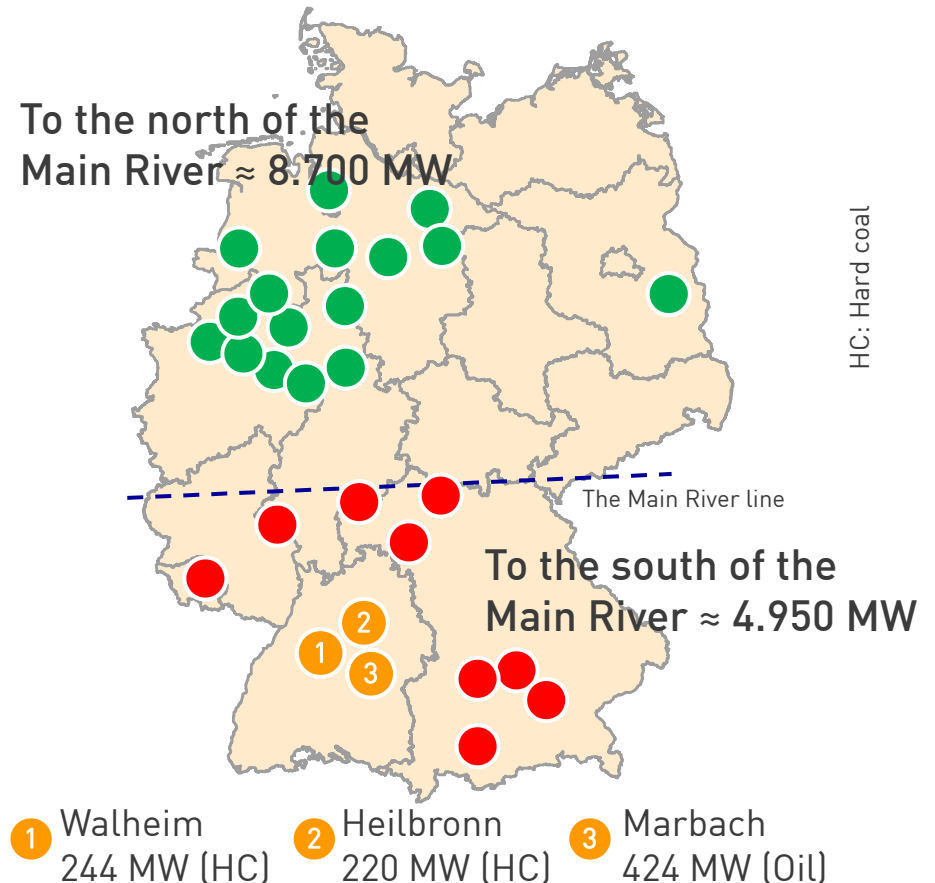
Profitable growth of wind capacity
on- and offshore

Operators in Germany including EnBW decided to decommission a significant number of conventional power capacity



Status of decommissioning

- > In Germany utilities applied for permission to take app. 13 GW of conventional power capacity off the market¹
- > EnBW has announced to take about 900 MW off the market
- > German federal network agency confirmed the 'system relevancy' for all EnBW plants
- > EnBW about to conclude first 'back-up' capacity agreement in Germany for plants in Marbach / Walheim



Regulator prohibits closure of capacity that is deemed relevant for grid and supply stability and introduced back-up capacity legislation (,Reservekraftwerksverordnung')

¹Status of decommissioning; Reference: federal network agency 18th August 2014

Design of back-up capacity legislation



Duration of legislation

- Regulation period is limited to 31. Dec. 2017
- Duration of back-up capacity agreement typically two years
- After two years system relevancy is assessed again

Legal design and counterparties

- Contract between plant owner and transmission network operator (TSO)
- The TSO recovers the costs through network usage fees

Ownership of plants

- The operator (e.g. EnBW) remains owner of the plant
- Owner does not decide on operation periods any more
- Risk of damages is transferred to the TSO

Compensation mechanism

- Compensation scheme aims to reimburse owner only for future costs
- Variable costs are passed on to the TSO through invoicing
- Pre-agreed compensation for fixed costs (e.g. personnel, overhead etc.)
- Maintenance and major repairs are passed on too

Impact on wholesale market prices

- Plants are no longer taking part at the energy only market
- Further impact - uncertain

▶ Scheme is not a viable long-term business model, because not all costs are reimbursed

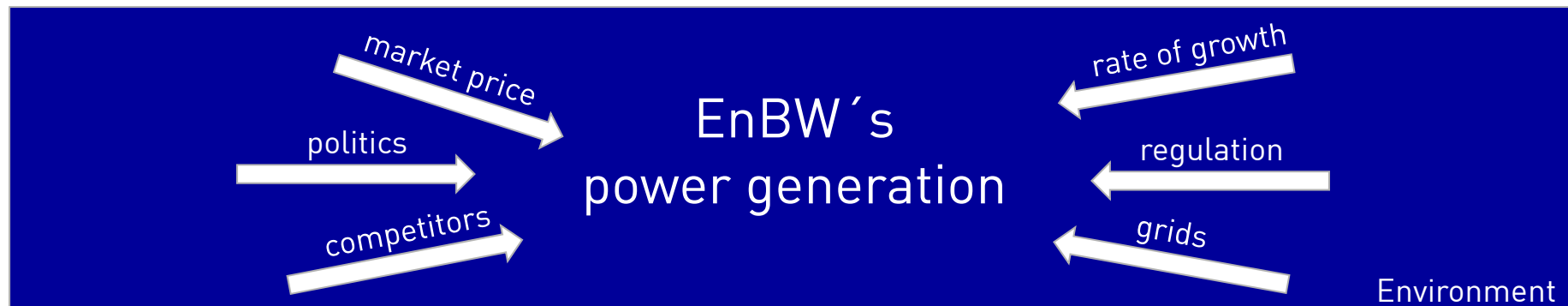
EnBW's strategic initiatives in conventional power generation



- 1** Reduction of overcapacities in portfolio
 - › Identify critical plants and verify future viability in market
- 2** Reorganization of corporate structure
 - › Create a more flexible and efficient organization
- 3** Cost reduction
 - › Optimize cost structure of plants and entire portfolio
- 4** Generate business growth opportunities
 - › Use opportunities in district heating and waste treatment
 - › Sell engineering and maintenance knowledge to third parties



Strategic actions within EnBW's power generation



Strategic actions

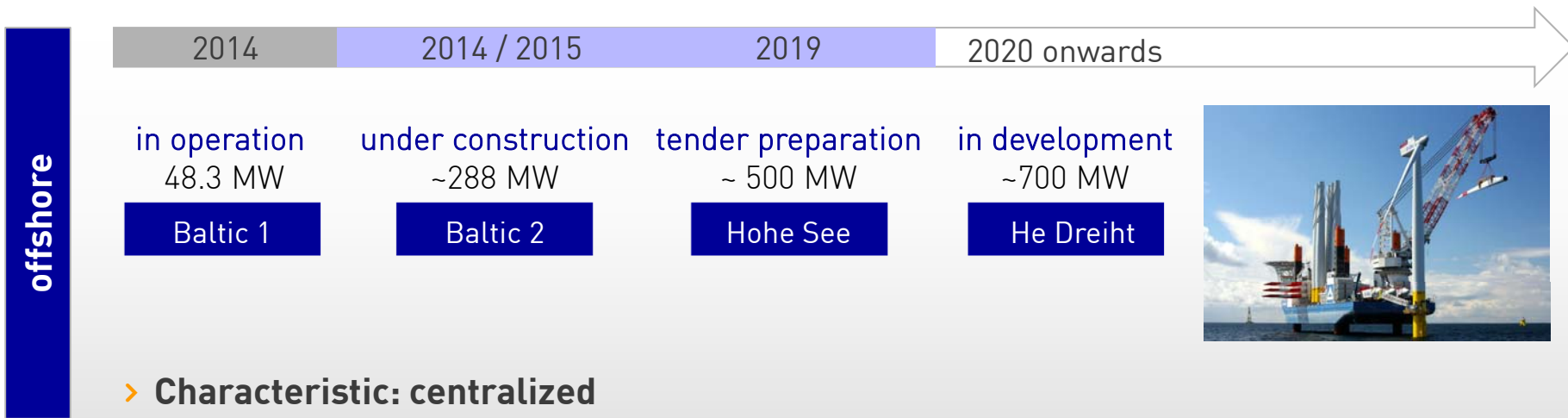
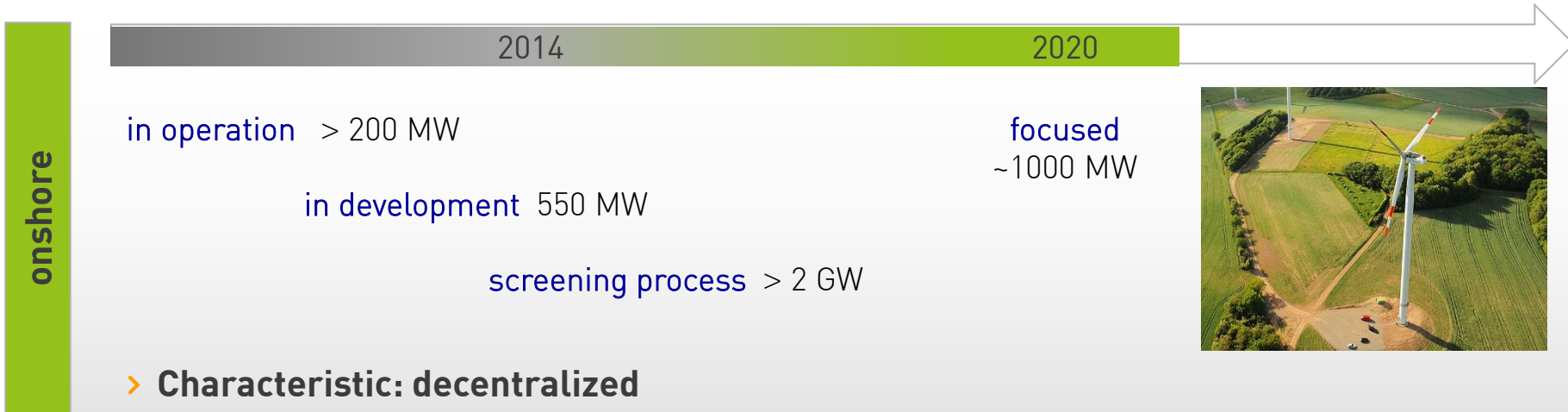
conventional

Restructuring / optimization of cost structure
Decommissioning of plants

renewable

Profitable growth of wind capacity on- and offshore

EnBW's current wind project portfolio - Growth as strategic action onshore and offshore



Offshore Wind: Industry is creating economies of scales



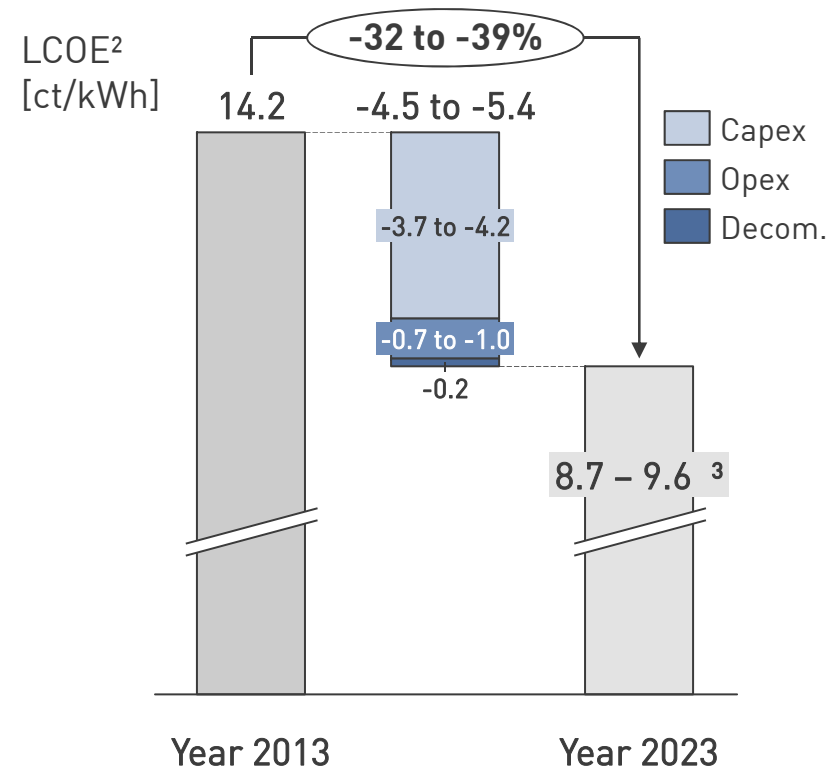
Technical progress has been significant over recent years

- > Capacity of individual turbines
- > Efficiency and reliability of technology
- > Water depths
- > Distance to shore
- > Scale of projects

Supply chain gradually accommodates investors' requirements

- > **Construction contracts:** development from fragmented multi-contracting structures towards EPCI contracts with few or no interfaces and wide-ranging cost guarantees
- > **Operation contracts:** continuous increase in duration, technical scope and scope of guarantees (e.g. defect or availability guarantees)

Cost reduction potential



Wind farm B (40m water depth, 80km distance to coast)
Scenario 1³: 6MW / turbine; Scenario 2: 8MW / turbine

Development in the offshore wind sector meets requirements of potential investors



Investors' perspective and requirements

- › Pressure on interest rates is not decreasing
- › Investors with substantial assets under management, e.g. pension funds, need to fulfil certain yield requirements
- › Investors become increasingly experienced about offshore wind
- › Key investment requirements:
 - › At least one strong industrial equity sponsor being committed long-term to a project
 - › Supportive remuneration scheme

Match with offshore wind / EnBW's offering

- › Offshore Wind projects offer significant yields over investment horizons greater 10 years
- › Significant ticket size per investment
- › Supportive regulatory environment
- › EnBW takes multiple roles as:
 - › Long-term strategic investor willing to take majority as well as significant minority stakes in projects
 - › Provider of engineering, operation and power trading services

Partnerships are key to generate growth. EnBW is very well positioned to attract investors and participate in new investment opportunities.

Netze BW GmbH - Player in the German Electricity Market

Dr. Christoph Müller
Netze BW GmbH
CFO

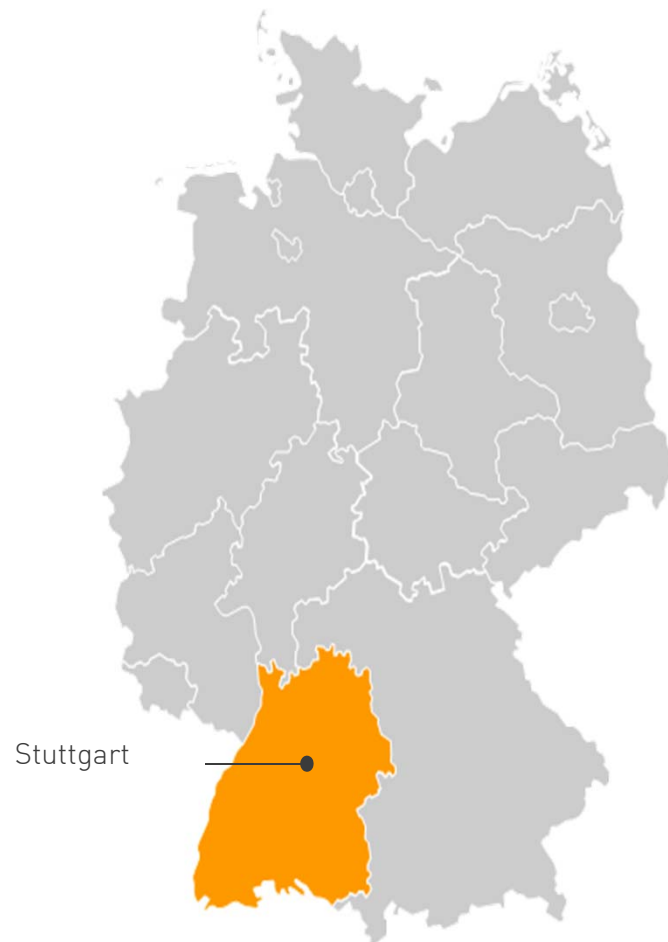
Ein Unternehmen der EnBW



Agenda



1. Netze BW GmbH - Overview
2. The Regulatory Game
3. Future investment needs
4. Evaluation – what´s next
5. ROMI – our answer



General Data

headquarter:	Stuttgart
revenue 2012:	approx. 3 bn. €
employees:	approx. 3,300
> power grid	
customers:	approx. 2.7 M
grid length:	approx. 105,000 km
supplied area:	approx. 19,000 km ²
transmission volume:	approx. 48 TWh
concessions with municipalities :	623
> gas grid	
customers:	approx. 247,500
grid length:	approx. 6,550 km
supplied area:	approx. 454 km ²
transmission volume:	approx. 17 TWh
concessions with municipalities :	109
> water grid:	
customers:	approx. 7,5136
grid length:	approx. 2,649 km
supplied area :	approx. 207 km ²
transmission volume:	approx. 42 million m ³

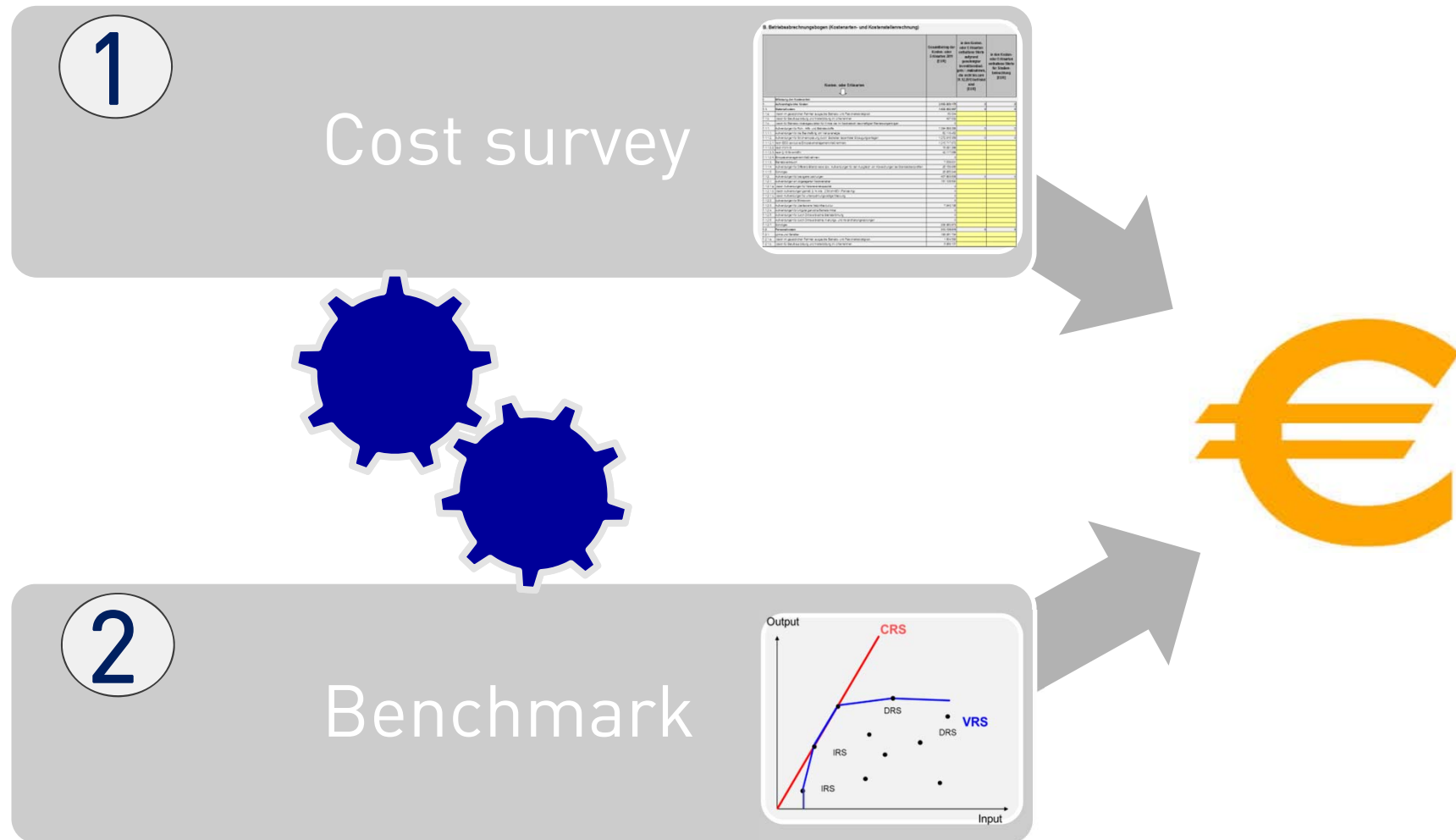
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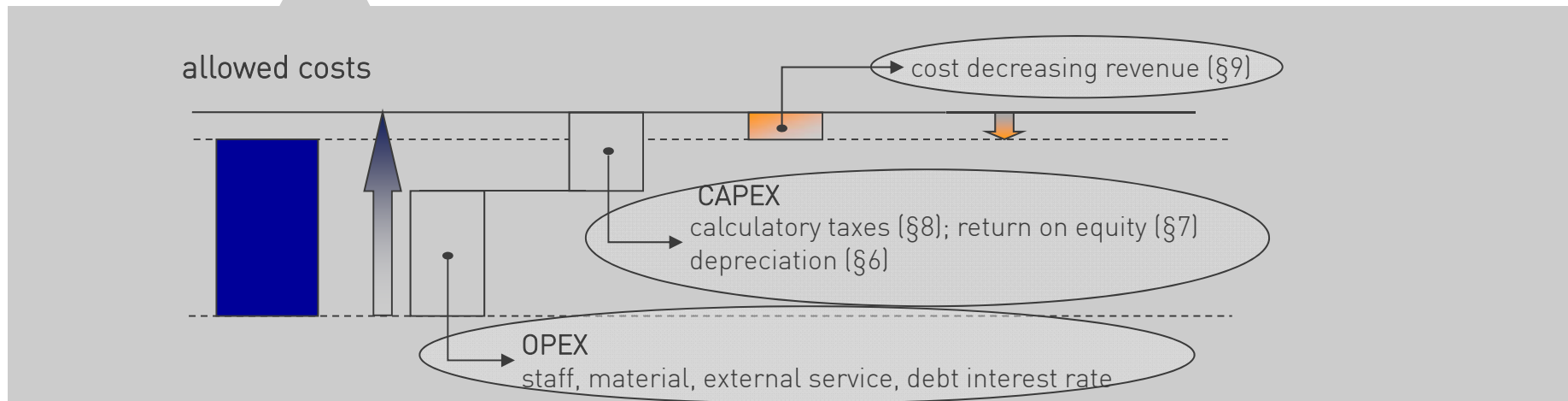
The Regulatory Game

Correlation between Cost survey and Benchmark



The Regulatory Game

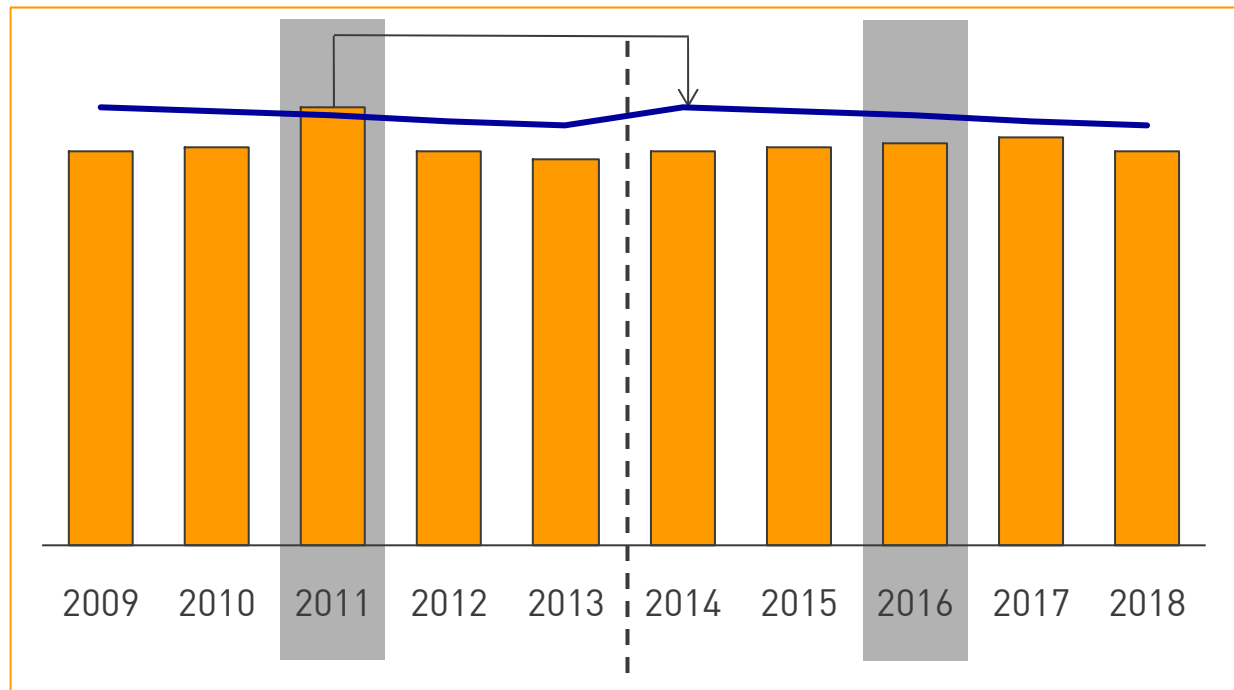
Cost survey due to GasNEV and StromNEV as starting basis



General idea

- > The annual profit and loss statement builds the basis to determine the opex
- > The calculation of capex is fixed in the legal act

The Regulatory Game Incentive Regulation

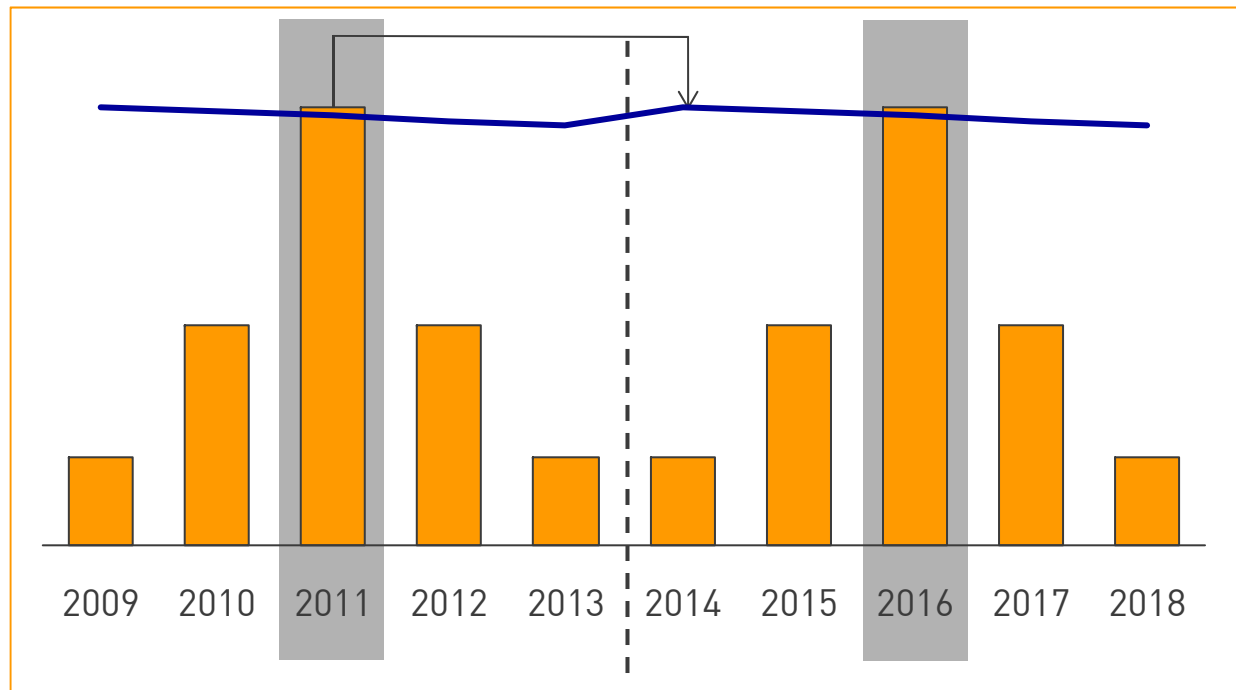


General idea

- The regulatory-agency defines for a period of 5 years the maximum revenue of each year of a specific base year
- For each grid company an efficiency value is calculated from which the revenue cap derives
- Cost inefficiencies have to be reduced by a given percentage until 100% is reached

The Regulatory Game

"All theory is gray, and only the forest and experience are green"



A theoretical cost curve without success

- Each grid company reports the annual p & l statement
- According to § 6 Abs. 3 ARegV special costs of the base year can be eliminated
- The regulatory-agency verifies the annually costs

The Regulatory Game

The structural characteristics of Baden-Württemberg are not included properly



> Governmental

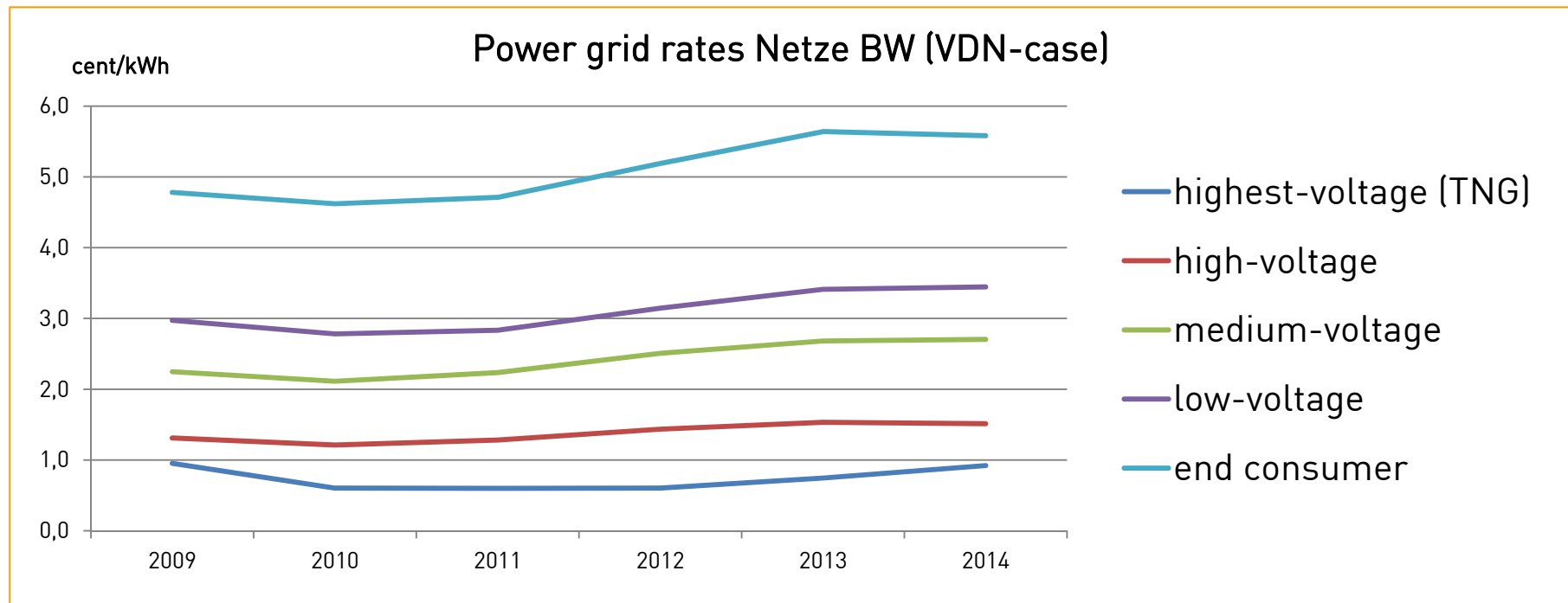
- > Possibility to request revision of the efficiency value, due to structural characteristics after §15 Abs. 1 ARegV
 - > Additional expenses of PV-Installations in B-W are not included in the Benchmark
 - > There is a much higher wage level in the grid area of the Netze BW
 - > No appropriate parameter for the costs of the gas tank
 - > Additional cost of the high-voltage grid are not included in the benchmark

> Public

- > Efficiency is one of the best arguments in the competition for concession

The Regulatory Game

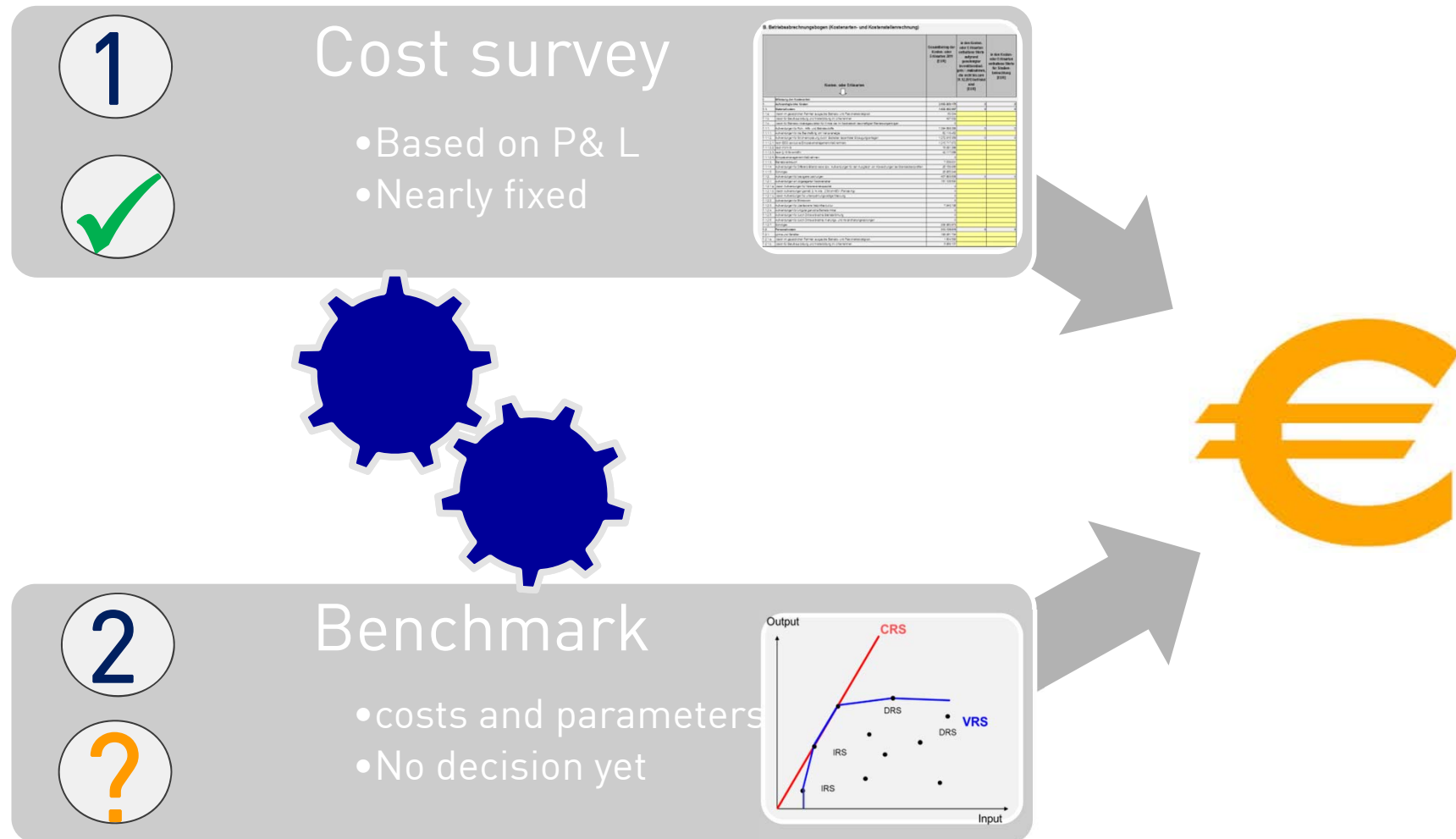
Developing of power grid rates of Netze BW



- Due to positive legal action positive revenues could be achieved in the past
- Due to the increasing rates of TSO the power grid rates of Netze BW has increased in the last years also
- Netze BW was well positioned in the past and will be in future

The Regulatory Game

Correlation between Cost survey and Benchmark



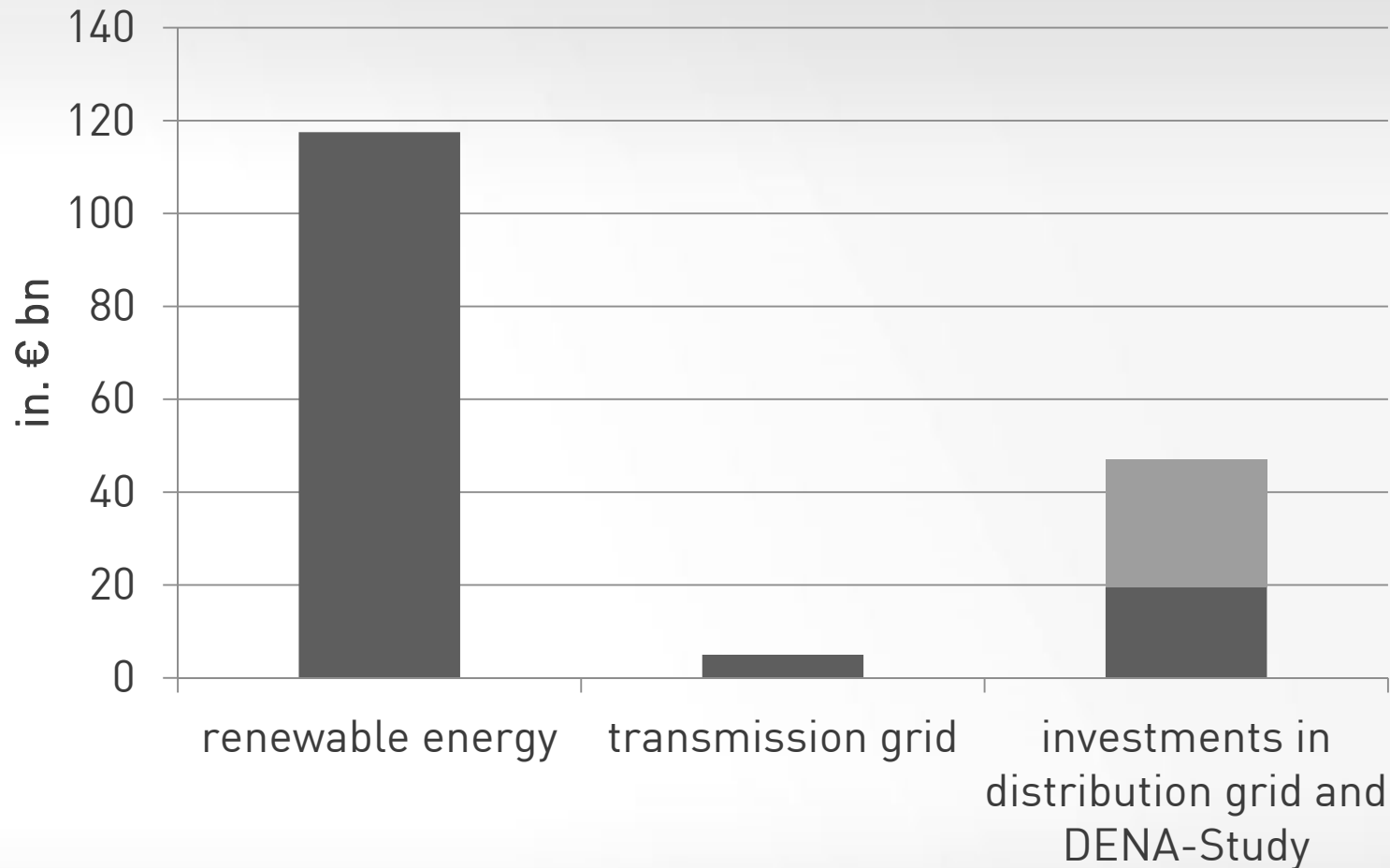
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Future investment needs

Investment in renewable energies, transmission and distributing grid from 2007 – 2013 and DENA-Study



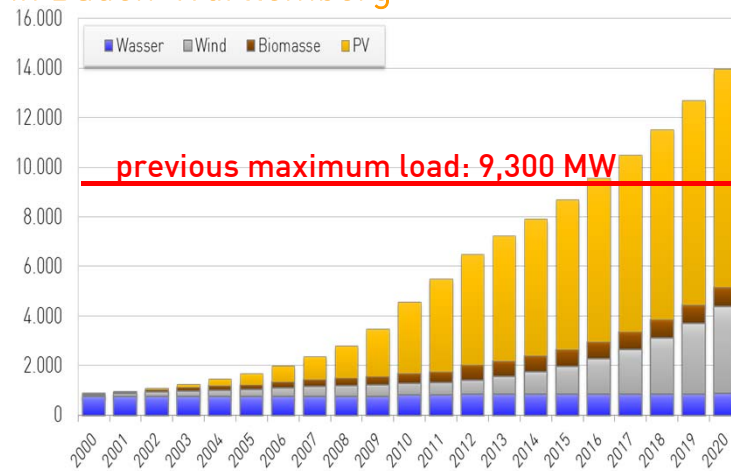
➤ Capability of investments by the distributing grid is essential for the energy revolution

Source: www.statista.com, Arbeitsgruppe Erneuerbare Energien Statistik

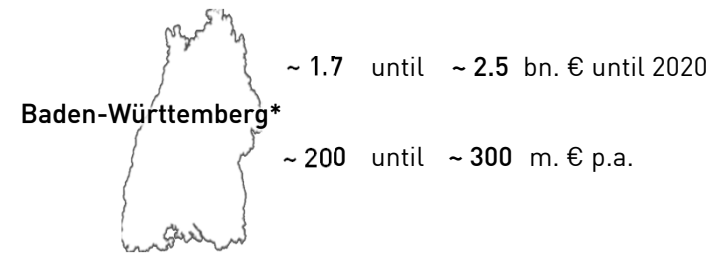
Future investment needs

Increasing need of investment

Installed renewable energy capacity in Baden-Württemberg



Amount of necessary investments

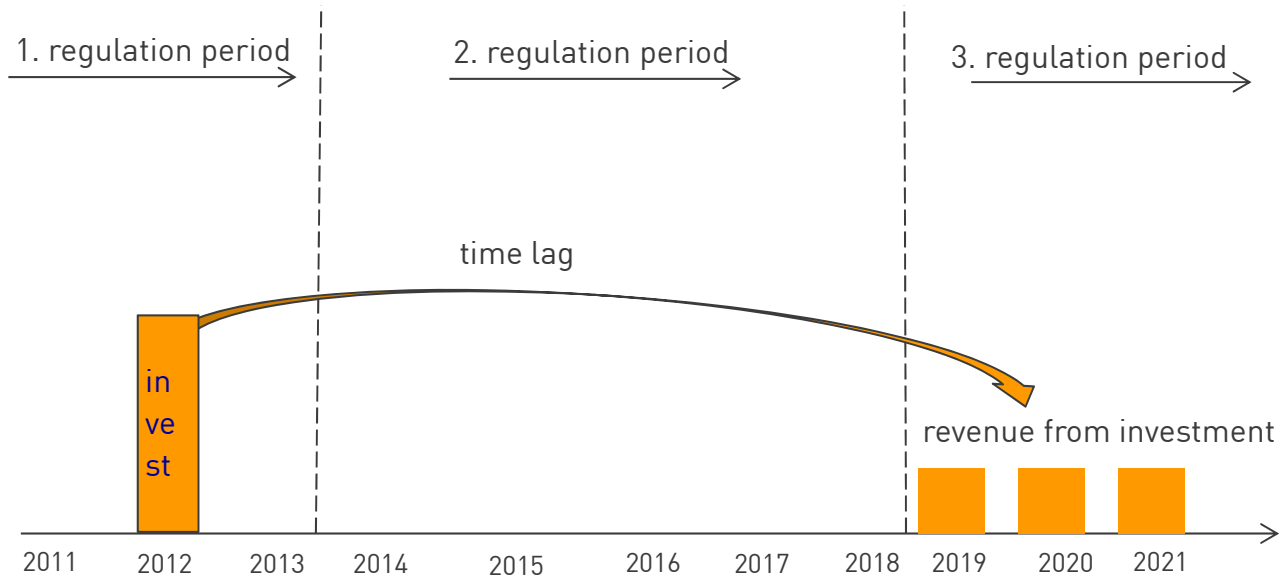


* Source: DENA-Study
Calculation of Netze BW

Problems

- Integration of renewable energies make huge investments into the electricity grid necessary
- Existing mechanisms to extenuate this effect are not sufficient:
 - high boundary
 - strict praxis of approval by the regulator, especially for distribution grid operators

Future investment needs Delay of investment revenue



Problems

- central problem: big time delay between investment and return of cost of capital (3 to 7 years)
→ actual rate of return is lower than suggested by the nominal interest rate granted by the regulator
- increasing need of investments intensifies this negative effect

Future investment needs Need for grid investments is widely accepted



Warum brauchen wir den Netzausbau?

Das Strom-Übertragungsnetz erfordert wie jede anspruchsvolle Infrastruktur ein ständiges Anpassen an den technischen Wandel. Seit einigen Jahren wachsen die Anforderungen an das Netz jedoch so stark, dass kleinere Ergänzungen nicht mehr ausreichen. Die Gründe dafür liegen im Wesentlichen bei den Zielen, die Deutschland sich gesetzt hat: den Umstieg auf erneuerbare Energien, das Erhalten einer hohen Versorgungssicherheit und die Verwirklichung des europäischen Binnenmarkts.

Zeitverzug der Investitionsrückflüsse

Eine Investition verursacht Kapitalkosten, die aber erst zum Beginn der nächsten Regulierungsperiode vergütet werden.

Dieser Zeitverzug stellt ein Investitionshemmnis dar. Zum einen wird sich für das Unternehmen ein Renditenachteil ergeben, sofern der Zinsverlust nicht barwertneutral ausgeglichen wird. Zum anderen kann es zu einer Liquiditäts- und zu einer Ergebnislücke kommen.

Energiepolitik

Wirtschaftsministerium stellt Verteilnetzstudie vor

Berlin (energate) – Durch den Ausbau der erneuerbaren Energien entsteht in den Stromverteilnetzen ein Investitionsbedarf von bis zu 49 Mrd. Euro.

Bundesnetzagentur: Erheblicher Investitionsbedarf im deutschen Stromnetz

Verivox



F Empfehlen Tweet +1 i ⚙

Bonn - Im deutschen Stromübertragungsnetz besteht laut Bundesnetzagentur ein erheblicher Investitionsbedarf. Das zeige die Auswertung der Netzzustands- und Netzausbauberichte der Übertragungsnetzbetreiber, die diese erstmals der Bundesnetzagentur vorgelegt haben. Die Gründe für diesen Bedarf seien vor allem die Netzauslastung aufgrund der zunehmenden Windenergieerzeugung sowie der Anstieg der Stromtransite.

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Evaluation – what's next

Why is an evaluation required?



Government

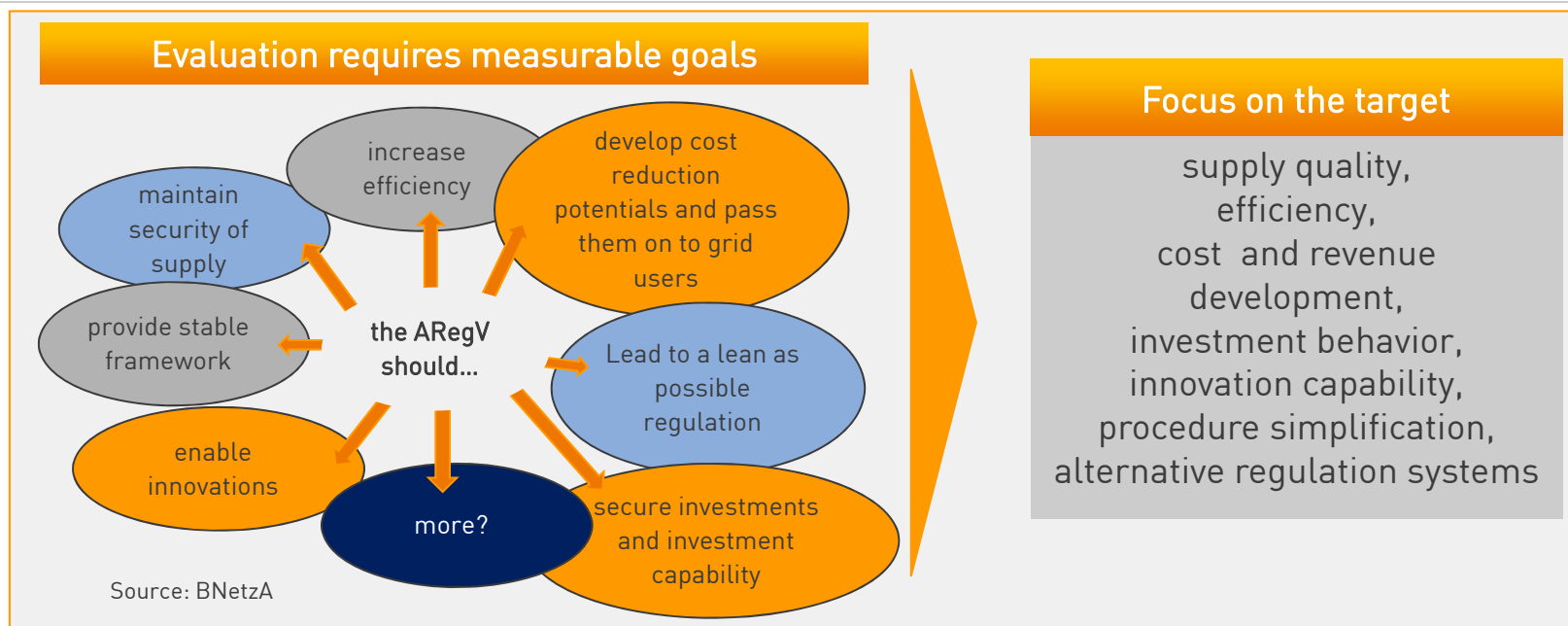
- The current law does not contain any regulatory system after 2018

Regulation Agency

- The regulation agency has to deliver a report with evaluation and improvement proposals to the department of environment till the end of 2014

Grid companies

- The energy revolution is a challenge for both the grid companies and regulation agency's
- Adjustments are necessary on the distribution network due to decentralized production factory's
- Therefore it is necessary to evaluate if the current regulation system can handle the current determining factors



Netze BW participates by....

- › Delivering company specific data and collaborating in all workshops in the gas sector
- › Being aware of the grid specific circumstances with in regard of sustainability
- › Presenting the EnBW opinion in the evaluation process
- › Lobbying

- Speech by Jochen Homann (President of the BNetzA) at the 6.th Petersberg-Regulation Conference on 01. April 2014:
 - *Regulation has to support the ability to invest of the companies in the regulated markets - and indeed of all companies! It is a central task of regulation to ensure that companies can invest in a future-proof infrastructure.... Capable grids are the lifeline of the industrial society.In telecommunications and the energy sector are we facing major challenges to make the networks/grids for future challenges fit.*

BNetzA ...

- has recognized the importance of grids
- knows about the complexity
- is aware of the strengthening of the ability to invest



A new ARegV that....

- reduces time lag
- provides an appropriate return on assets
- leads to more transparency

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ROMI – our answer EnWG-Amendment 2011 with obligation of integration of metering systems

Obligation after EnWG § 21 c Abs.1 a-c

When technically possible the companies are obligated to install a measurement system:

- > consumer > 6000 kWh
- > decentralized producer > 7 KW
- > in case of new buildings & renovation

Extension of obligation EnWG § 21 c Abs.1 d

If technically possible and economical justifiable integration in all other buildings

Intelligent measuring system

Consists of an basic counter and an gateway

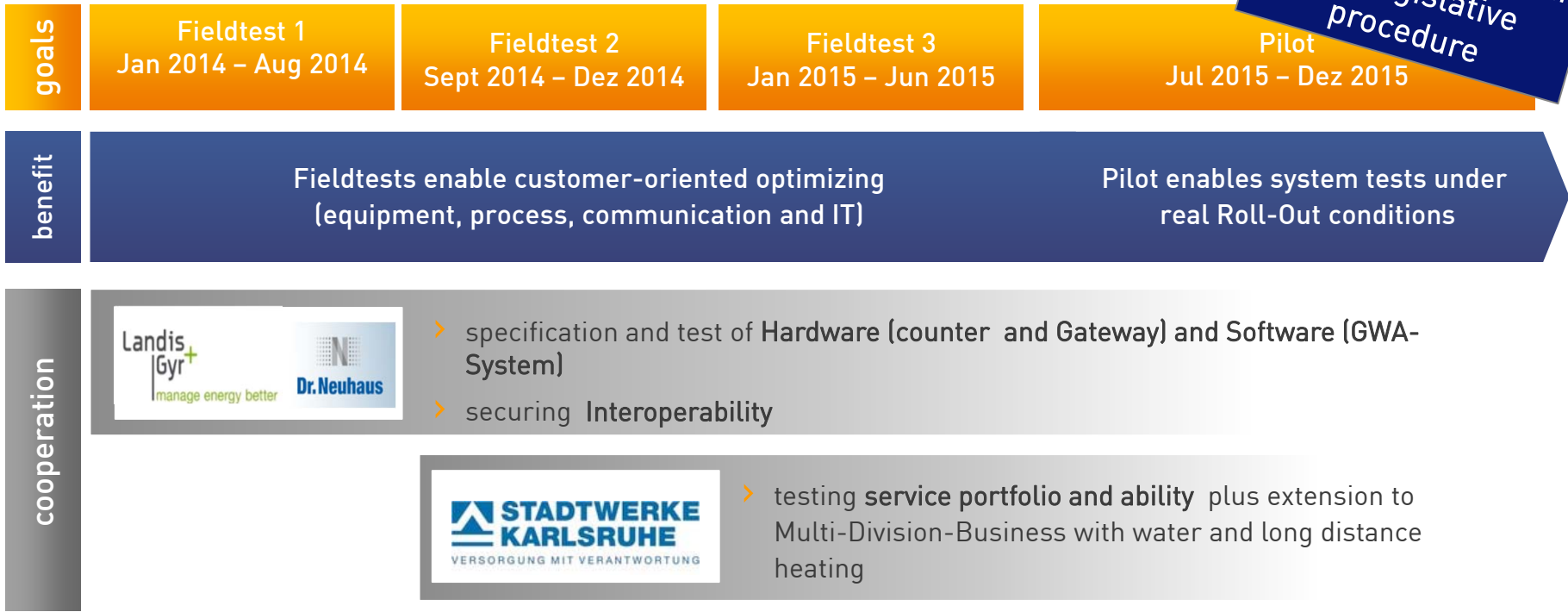


ROMI – our answer

Assembly phased development of the overall system reduces risks and costs



Flexibility for delay in the legislative procedure



Conclusion



The Regulatory Game

- Cost survey and benchmark are highly correlated
- The priority on full cost recognition is higher than the benchmark

Need for investments

- Increasing need of investments due to installed renewable capacity
- Time delay between investment and return of cost of capital up to 7 years

Evaluation – whats next?

- Evaluation of the current regulation system is necessary
- A new ARegV must reduce time lag and provides an appropriate return on assets

ROMI – our answer

- Netze BW as first mover and makes use of the opportunities of cooperation's
- Netze BW is well positioned for the “Smarter World”

Capital Market Day 2014 >

Sustainable strengthening of EnBW's profitability until 2020

EnBW Energie
Baden-Württemberg AG



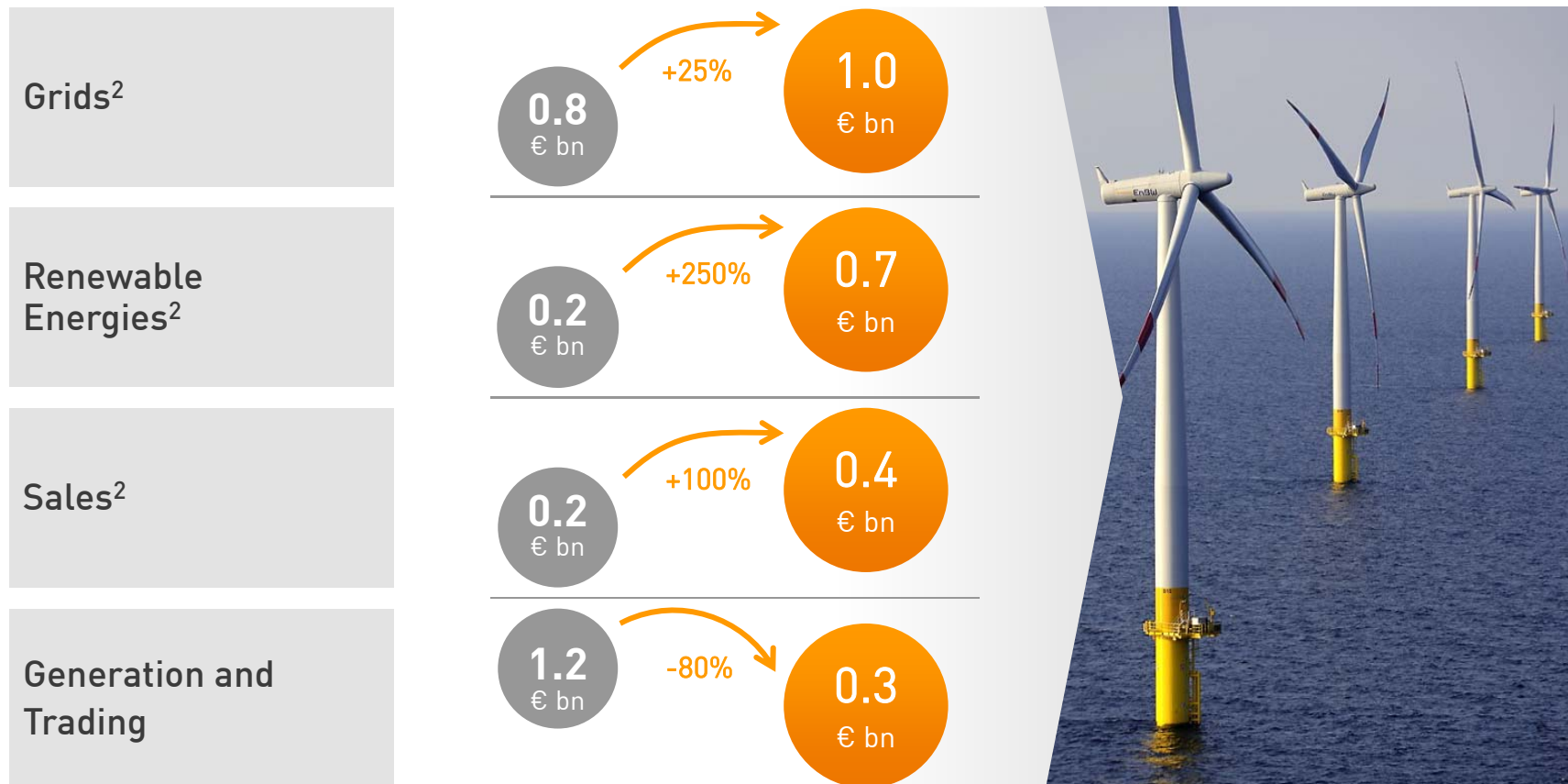
1 October 2014
Thomas Kusterer, Chief Financial Officer



Earnings contribution of each segment will change significantly regaining EnBW's ante „Energiewende“ adjusted EBITDA level



LONG TERM OBJECTIVES¹

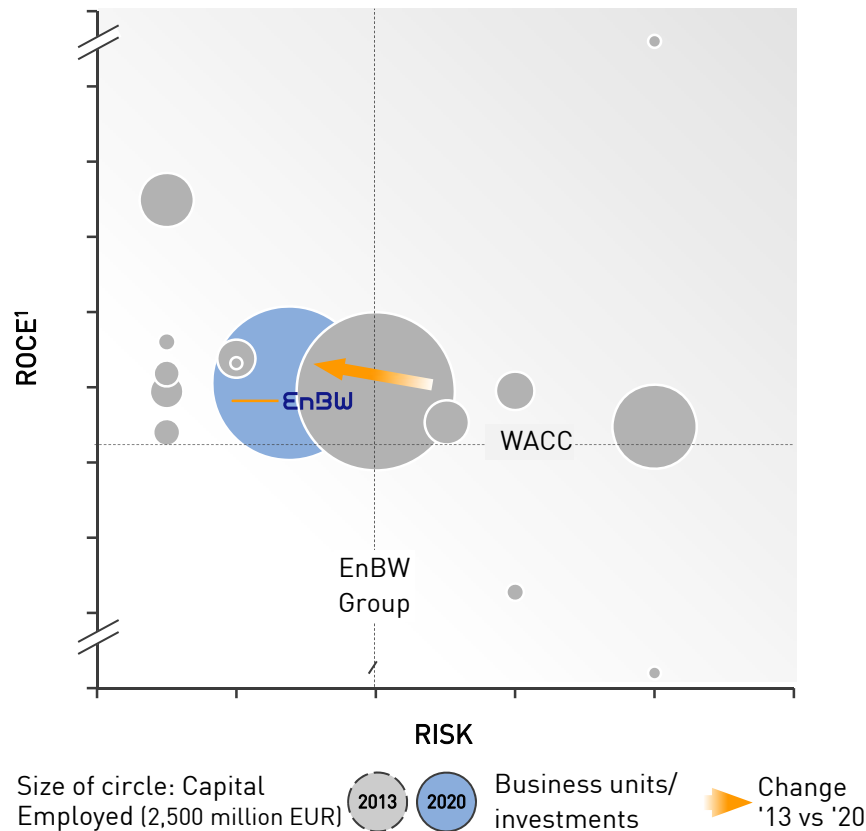


¹ Figures as of 31.12.2013 ² Strategic growth issues

EnBW's portfolio development will lead to an improved risk-return profile



Risk-return portfolio of the EnBW Group 2013-2020



- > Diversified investment portfolio contributes to the portfolio stability
- > Grids as a stabilising core with predictable risk/returns
- > Quasi-regulated renewable energies with planned investments in wind especially (on-/offshore)
- > New business models in the area of decentralised energy solutions; increasing efficiency (especially B2B)
- > Reduced focus on conventional and nuclear power generation

Schematic diagram

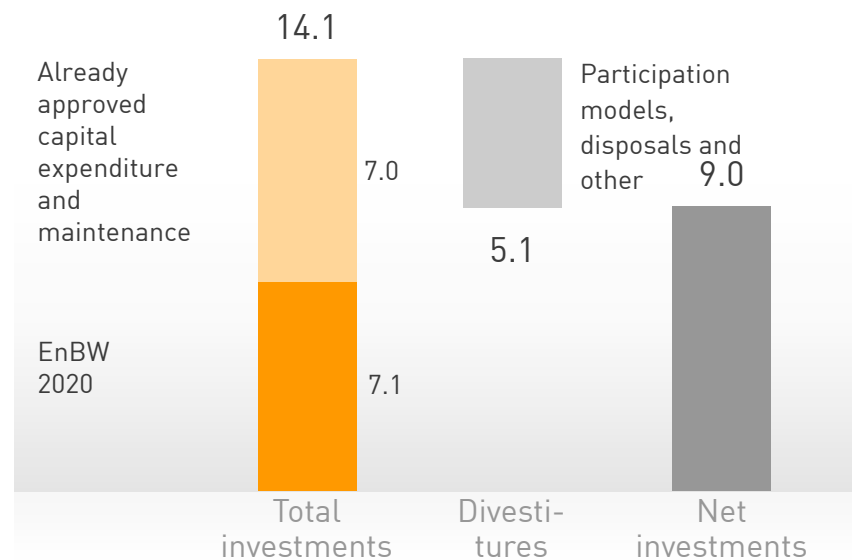
¹ ROCE for business units and investments greatly simplified

Focused investments and divestitures will result in an improved portfolio



Reorganisation of portfolio up to 2020

in € billion



Reorganisation of portfolio 2014 - 2016

in € billion



Sales / decentralised solutions

- > Development of solution provider services and nationwide introduction of smart meters



Renewable Energies

- > EnBW Baltic 2 offshore project and development of onshore portfolio



Grids

- > Ensurance of security of supply and extensive investment in renewable energies plants connections



Generation / Trading

- > Lausward (CCGT) and optimisation of existing portfolio



Following the success of "Fokus" a further sustainable earnings improvement in a mid-triple-digit million euro range p.a. by 2020 is on its way



Overdelivery of the "Fokus" efficiency programme

- > Programme acceleration by one year
- > With € 785m "Fokus" target (€ 750m) will be exceeded by the end of 2014

Next Steps



Four major areas of focus for further earnings improvement by 2020

1



PRO EnBW

Optimisation of structure/overheads and investments

- > Optimisation of organisation/Group structure
- > Reduction of overheads (general)
- > Earnings contribution from important investments

2



NEO²

> Restructuring generation

- > Closure of unprofitable power stations/locations
- > Reduction of business-specific overheads

3



Customer proximity

> Optimisation of Sales / Operations unit & innovation

- > Optimisation of "cost-to-serve"
- > Increased revenues (esp. decentralised solutions, commercial relationships)
- > New business through innovations

4



Operational excellence

> Continuous improvements & support functions

- > Continuous improvements (efficiency, processes) – all BUs/FUs
- > Optimisation of support functions (sales, IT, infrastructure, property)

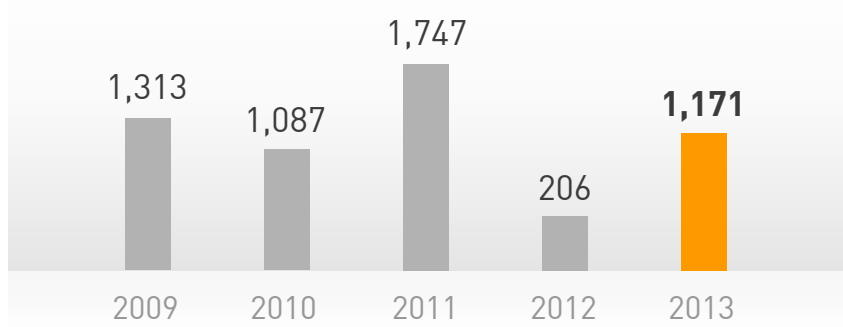
Target of reducing influenceable costs by more than 30%

Improvement of financial headroom is top of the agenda to maintain strong credit standing



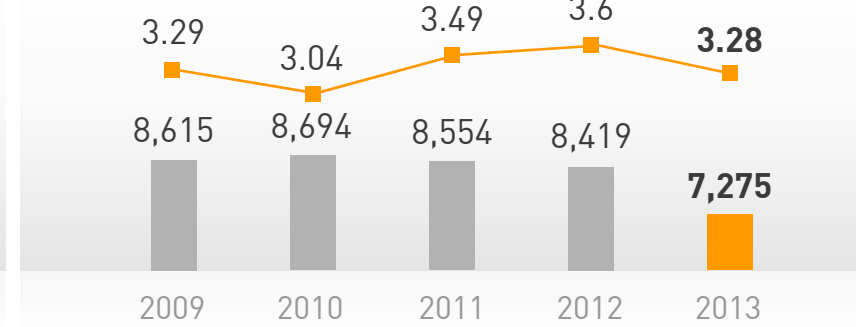
Free cash flow

in € million¹



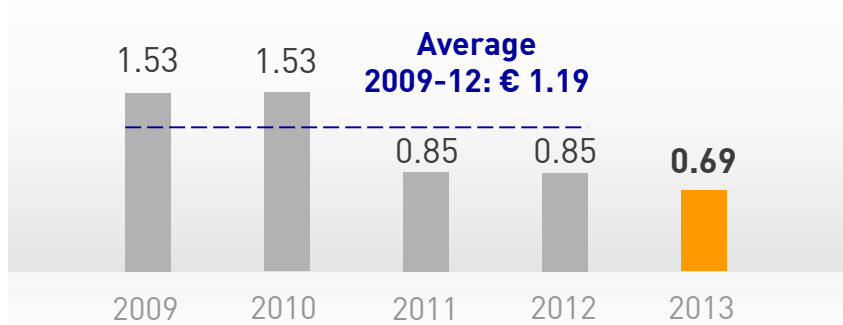
Adjusted net debt / Dynamic debt ratio

in € million¹

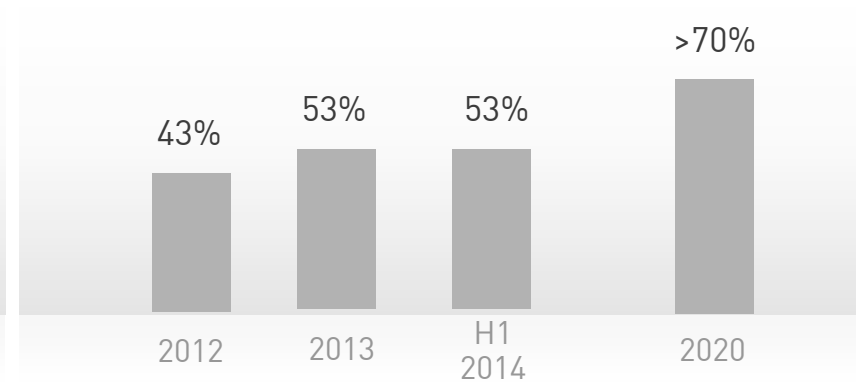


Dividend history

in €



Share of low-risk business²



¹ Prior-year figures restated; ² Segments: Grids and quasi-regulated renewable energies

EnBW took advantage of favourable market conditions for several transactions in the debt capital market



Capital Markets

- > EnBW secures low interest rate environment via hybrid and senior bond issuance as well as private placements

	Hybrid Bond	Senior Bond	PP1	PP2	PP3
Volume	€ 1,000m	€ 500m	€ 100m	€ 100m	€ 50m
Settlement Date	18 March 2014	4 June 2014	13 June 2014	16 June 2014	1 Aug 2014
Coupon	3.625%	2.500%	2.875%	3.08%	2.90%
Yield	3.75% (to first call)	2.517%	3.005%	3.134%	2.95%
Maturity/First Call	62 years / 7 years	12 years	20 years	25 years	30 years
Bond Rating	Moody's: Baa2; S&P: BBB-	Moody's: A3; S&P: A-	Not rated separately	Not rated separately	Not rated separately
Spread vs. MS	233.8BP	72BP	78.5BP	85BP	86BP



Syndicated loan

- > As of 21 July 2014 reduced facility amount of € 1.5bn until July 2019
- > Prolongation option in 2015 respectively 2016 for a further year each until July 2021 at the latest

EnBW significantly reduced its refinancing risk until 2020

EnBW is the utility with the most focused “Energiewende” business model and the highest share of low-risk business



Our clear strategic approach...

- › Implementation of EnBW 2020
 - › **Customer proximity** provides innovative strength and product development
 - › **Engine room** secures supply via efficient expansion of energy infrastructure
- › Lowest CO₂ footprint secured by expansion of renewable energies
- › ONE EnBW streamlining EnBW's structure
- › Stable government-related shareholder structure (99.6% in public ownership) supports focus on Baden-Württemberg and selective European markets



... is supported by our solid financial framework

- › Dimensions of our Performance Management (2020)
 - › EBITDA of € 2,3 – 2.5bn
 - › Dynamic leverage ratio of < 3.3
 - › ROCE of 8.5 to 11%
- › “Fokus” reduced influenceable cost by more than €750 million
- › Further sustainable efficiency enhancement in a mid-triple-digit million euro range p.a.
- › As the only fully integrated German utility EBITDA contribution of more than 50 % from low-risk business
- › Remain cash flow positive

