

MVV ENERGIE
ENERGISING THE FUTURE

NEW ENERGY? YES, BUT JUST AS RELIABLE!

FACT BOOK
1ST NINE MONTHS OF 2013/14 PURSUANT TO IFRS

15 AUGUST 2014



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KEY FINANCIAL DATA FOR THE 1ST NINE MONTHS OF 2013/14

Key figures of the MVV Energie Group for the 1st nine months of 2013/14 financial year – Adjusted

in Euro million	1 Oct 2013 to 30 Jun 2014	1 Oct 2012 to 30 Jun 2013	% change
Sales excluding energy taxes	2 959	3 166	-7
Adjusted EBITDA ^{1, 2}	304	341	-11
Adjusted EBIT ^{1, 2}	185	218	-15
Adjusted EBT ^{1, 2}	152	166	-8
Adjusted net income for period ^{1, 2}	109	114	-43
Adjusted net income for period after minority interests ^{1, 2}	95	90	+6
Adjusted earnings per share ^{1, 2} (Euro)	1.44	1.37	+5
Cash flow from operating activities ²	244	143	+71

1 excluding non-operating financial derivative measurement items, excluding structural adjustment for part-time early retirement, excluding restructuring expenses in previous year and including interest income from finance leases

2 previous year`s figures adjusted

Sales excluding energy taxes by reporting segments in the 1st nine months of 2013/14 financial year

in Euro million

	1 Oct 2013 to 30 Jun 2014	1 Oct 2012 to 30 Jun 2013	% change
Generation and Infrastructure	298	284	+5
Trading and Portfolio Management	726	833	-13
Sales and Services	1 767	1 838	-4
Strategic Investments	165	209	-21
Other Activities	3	2	+50
Total	<u>2 959</u>	<u>3 166</u>	-7

Adjusted EBIT by reporting segments in the 1st nine months of 2013/14 financial year

in Euro million

	1 Oct 2013 to 30 Jun 2014	1 Oct 2012 to 30 Jun 2013	+/- change
Generation and Infrastructure	114	115	-1
Trading and Portfolio Management	-15	4	-19
Sales and Services	40	58	-18
Strategic Investments	34	37	-3
Other Activities	12	4	+8
Total	<u>185</u>	<u>218</u>	<u>-33</u>

Reconciliation of EBIT (income statement) with adjusted EBIT in the 1st nine months of 2013/14 financial year

in Euro million

	1 Oct 2013 to 30 Jun 2014	1 Oct 2012 to 30 Jun 2013	+/- change
EBIT as reported in income statement	207	219	-12
Financial derivative measurement items	-27	+5	-32
Structural adjustment for part-time early retirement ¹	+2	+2	0
Restructuring expenses ¹	–	-11	+11
Interest income from finance leases	+3	+3	0
Adjusted EBIT	<u>185</u>	<u>218</u>	<u>-33</u>

¹ previous year's figures adjusted

Key factors in the 1st nine months of 2013/14 financial year affecting year-on-year adjusted EBIT performance

Positive factors

- ▶ Expansion of renewable energy generation portfolio
- ▶ Special items at MVV Enamic subgroup
- ▶ Loss of charge from downtime due to turbine damage in environmental business in previous year

Negative factors

- ▶ Significantly mild weather conditions
- ▶ Continuing low clean dark spread (CDS)
- ▶ Since January 2013, CO₂ emission allowances previously allocated free of charge to be auctioned
- ▶ Lower waste prices

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KEY FINANCIAL DATA FOR THE 2012/13 FINANCIAL YEAR

2012/13 financial year at a glance

- ▶ **Sales rise from Euro 3.89 billion and pass Euro 4 billion mark for the first time**
- ▶ **Adjusted EBIT declines from Euro 223 million to Euro 210 million**
- ▶ **Investments rise from Euro 294 million to Euro 392 million**
- ▶ **Due to growth programme, share of electricity generation attributable to renewables and CHP increases from 49% to 52%**
- ▶ **7% increase in adjusted earnings per share**

Key figures of the MVV Energie Group for the 2012/13 financial year – Adjusted

in Euro million

	2012/13	2011/12	% change
Sales excluding energy taxes	4 044	3 895	+4
Adjusted EBITDA ¹	377	399	-6
Adjusted EBIT ¹	210	223	-6
Adjusted EBT ¹	144	151	-5
Adjusted annual net income ¹	102	98	+4
Adjusted annual net income after minority interests ¹	85	80	+6
Adjusted earnings per share ¹ (Euro)	1.29	1.21	+7
Cash flow from operating activities	371	285	+30

¹ excluding non-operating financial derivative measurement items, excluding restructuring expenses and including interest income from finance leases

Sales excluding energy taxes by reporting segments in the 2012/13 financial year

in Euro million

	2012/13	2011/12	% change
Generation and Infrastructure	390	354	+10
Trading and Portfolio Management	1 054	976	+8
Sales and Services	2 356	2 162	+9
Strategic Investments	243	398	-39
Other Activities	1	5	-80
Total	<u>4 044</u>	<u>3 895</u>	+4

Adjusted EBIT by reporting segments in the 2012/13 financial year

in Euro million

	2012/13	2011/12	+/- change
Generation and Infrastructure	149	141	+8
Trading and Portfolio Management	-16	3	-19
Sales and Services	40	21	+19
Strategic Investments	32	38	-6
Other Activities	5	20	-15
Total	<u>210</u>	<u>223</u>	<u>-13</u>

Reconciliation of EBIT (income statement) with adjusted EBIT in the 2012/13 financial year

in Euro million

	2012/13	2011/12	+/- change
EBIT as reported in income statement	210	198	+12
Financial derivative measurement items	+3	+20	-17
Restructuring expenses	-7	–	-7
Interest income from finance leases	+4	+5	-1
Adjusted EBIT	<u>210</u>	<u>223</u>	<u>-13</u>

Key factors in 2012/13 financial year affecting year-on-year adjusted EBIT performance

Positive factors

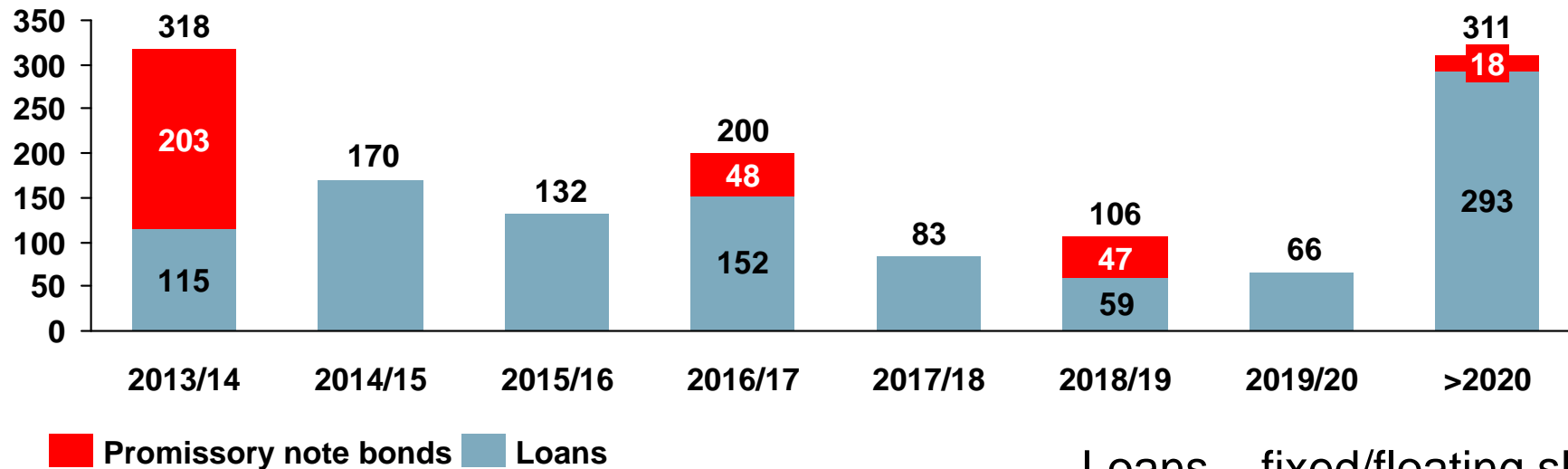
- ▶ Loss of charge from extended downtime at joint power plant (GKK) in Kiel in previous year
- ▶ Weather-related increase in turnover in the 2012/13 financial year
- ▶ Higher grid fees
- ▶ Expansion of renewable energy generation portfolio
- ▶ Non-recurrence of special and one-off items at MVV Enamic subgroup in previous year
- ▶ Cost reductions

Negative factors

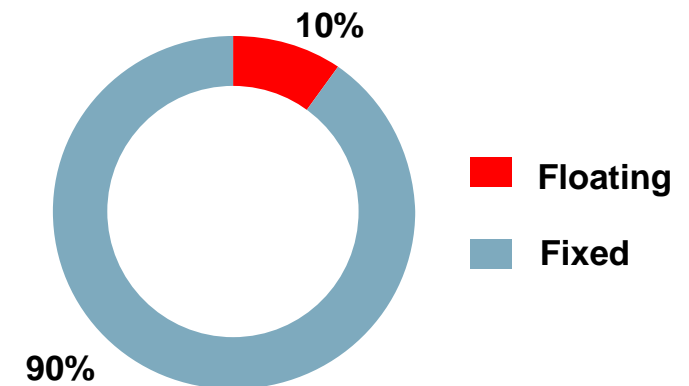
- ▶ Lower electricity and waste prices as well as lower availability of waste-to-energy plants
- ▶ Since January 2013, CO₂ emission allowances previously allocated free of charge to be auctioned
- ▶ Continuing low clean dark spread (CDS) and falling electricity prices on the wholesale market
- ▶ Discontinuation of contribution to earnings due to the sale of the shareholding in Stadtwerke Solingen
- ▶ Sale of Maintal-Werke in previous year

MVV Energie has a solid financing profile

Repayment profile in Euro million



Loans – fixed/floating shares



- ▶ Well-balanced maturity profile
- ▶ Long-term financing for investments, i.e. congruent terms
- ▶ High share of fixed interest agreements secures favourable rates on long-term basis
- ▶ Equity ratio of 34.5%

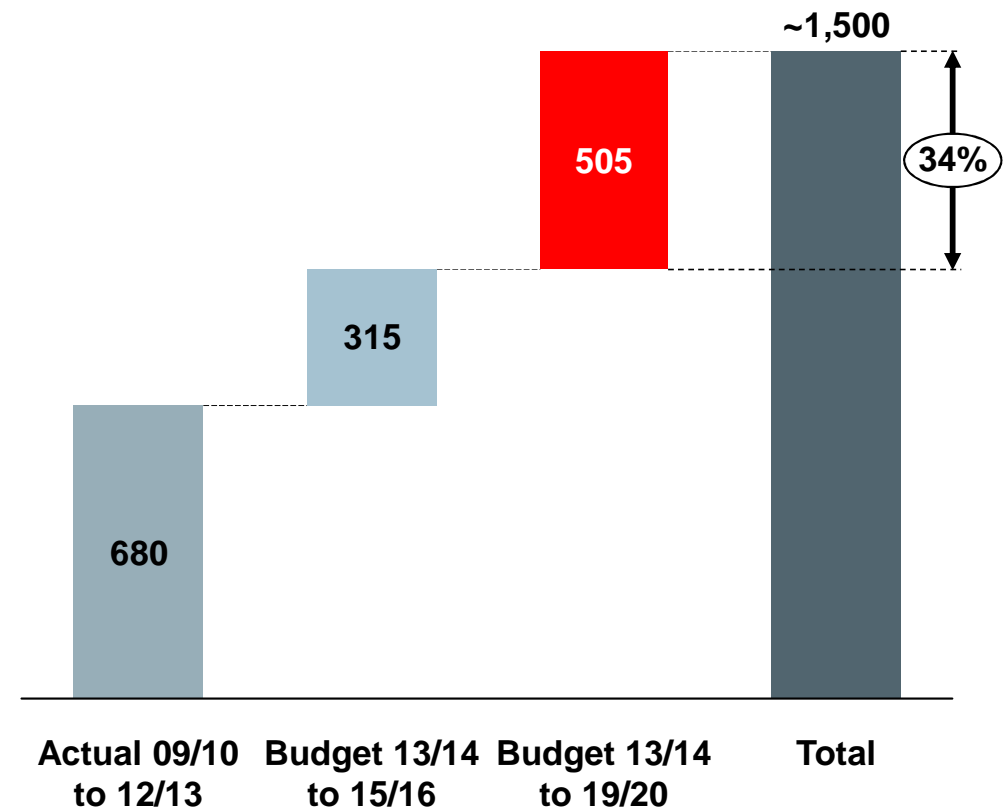
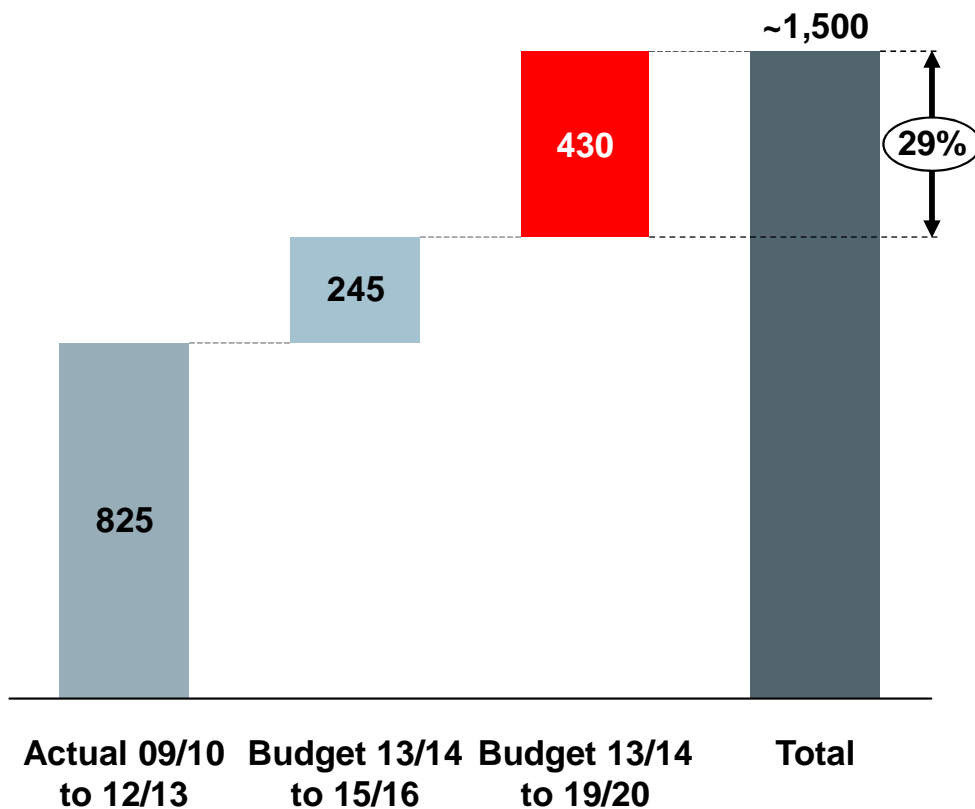
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MVV ENERGIE – IMPLEMENTATION OF OUR STRATEGY

Implementation of investment programme at MVV Energie Group

Growth: approx. 71% implemented or decided

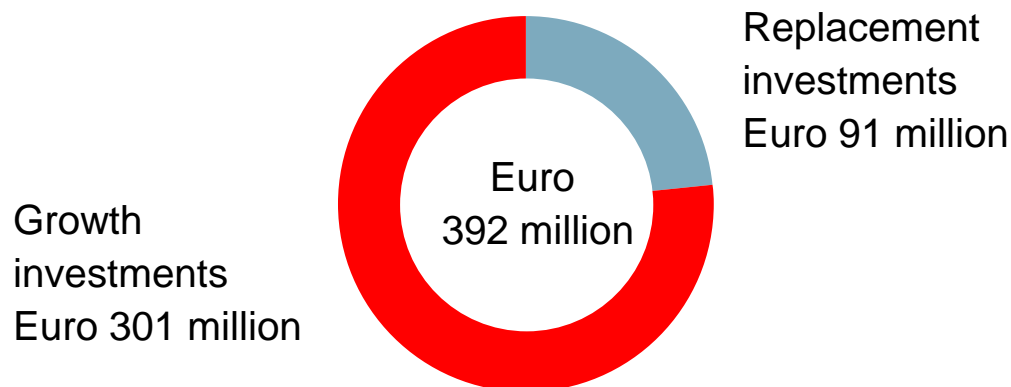
Existing: approx. 66% implemented or decided



Actual
 Budget – outstanding
 Budget – decided

Investment and growth

Investments in 2012/13 financial year



- ▶ The investment must fit into our strategic framework and generate at least the WACC and additionally a project specific value spread.

	2012/13	2011/12
ROCE	8.4	9.0
WACC	7.4	8.6
Value Spread	1.0%	0.4%

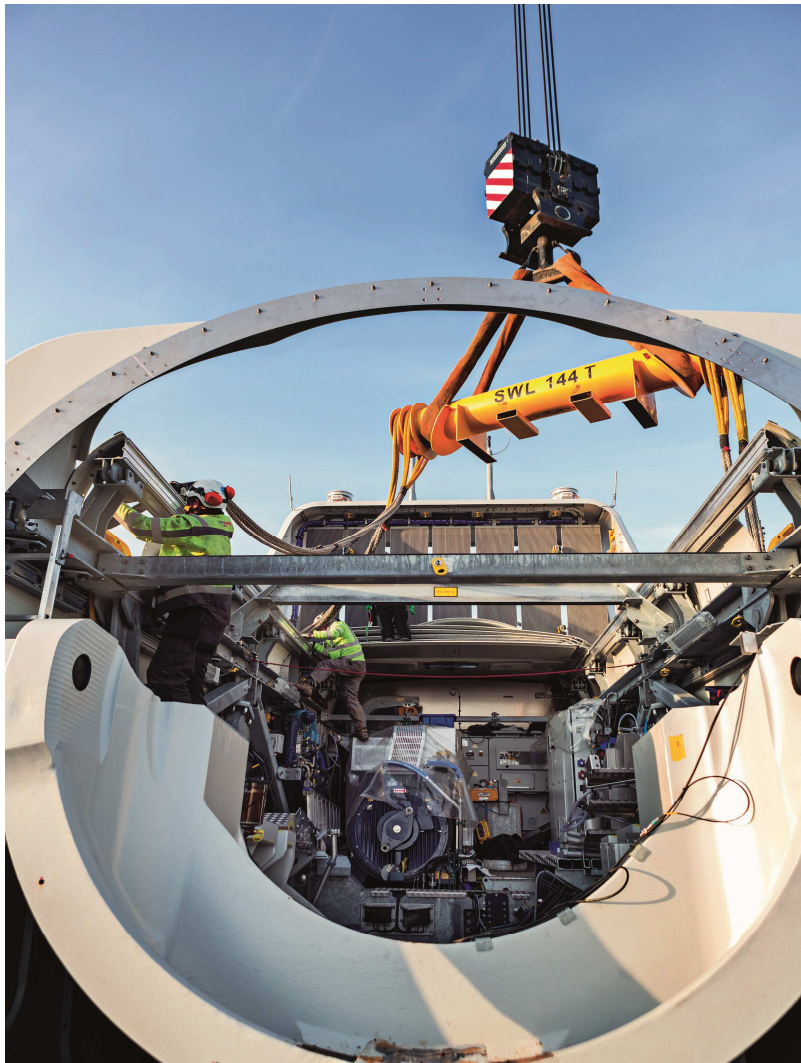
▶ Growth

- Acquisition of German wind farms from Iberdrola
- Acquisition of Dirlammen wind farm
- Construction of Kroppenstedt biomethane plant
- Construction of Ridham Dock biomass power plant
- Construction of Plymouth energy from waste plant
- Construction of district heating storage facility at GKM
- Extending the supply of district heating in Mannheim

▶ Existing business

- Optimising and preserving substance of supply facilities and distribution grids
- OptiMa energy efficiency project at the energy from waste plant in Mannheim
- New waste timber conveyor system at the biomass power plant in Mannheim

Wind farm Hungerberg – further expansion of wind energy



Hungerberg location in Rhineland-Palatinate

- ▶ **Launch of operations:** February 2014
- ▶ **Investment:** Euro 65 million
- ▶ Joint venture with juwi
- ▶ 10 V112 type wind turbines (Vestas)
- ▶ **Hub height:** 140 metres
- ▶ **Output:** 30 MW_e
- ▶ **Electricity output:** 84 kWh million p.a. (equivalent to consumption of 25,000 households)
- ▶ **CO₂ reduction:** 61,000 tonnes a year

Acquisition of German onshore wind farm portfolio from Iberdrola



Wind farm portfolio of Iberdrola

- ▶ **Launch of operations:** 2003 until 2008
- ▶ **Investment:** Euro 53 million
- ▶ **7 locations in 5 federal states**
- ▶ **Total of 40 wind turbines manufactured by GE and Gamesa:** of which
 - 22 MW in 2.0 MW capacity class
 - 37.5 MW in 1.5 MW capacity class
 - 3.4 MW in 0.85 MW capacity class
- ▶ **Output:** 63 MW_e
- ▶ **Electricity output:** 108 million kWh p.a. (equivalent to consumption of 30,000 households)
- ▶ **CO₂ reduction:** 78,000 tonnes a year

Plymouth energy from waste plant project: Construction work progressing on schedule

South West Devon Waste Partnership



Investment and financing

- ▶ **Investment:** approx. Euro 250 million
- ▶ **Financing:** secured with KfW IPEX-Bank, Svenska Handelsbanken and EIB
- ▶ **Start of main construction work:** August 2012
- ▶ **Launch of operations:** 2015

Technical data

- ▶ **Thermal use of waste volume:** 245,000 tonnes p.a.
- ▶ **Net electricity output:** 22.5 MW_e
- ▶ **Max. thermal energy output:** 23.3 MW_t

Broad and secure revenue base

- ▶ Municipal waste contract: 25-year term, 75% bring-or-pay
- ▶ Energy supply contract with a 25-year term to supply electricity and steam to navy base
- ▶ Government support for cogeneration and generation of renewable energy from biogenic share of waste

Biomass power plant project in Ridham Dock (UK)

Biomass power plant Ridham Dock



Investment and financing

- ▶ **Investment:** approx. Euro 140 million
- ▶ **Financing:** corporate funding
- ▶ **Start of main construction work:** April 2013
- ▶ **Launch of operations:** 2015

Technical data

- ▶ **Thermal use of waste wood volume:** 172,000 tonnes p.a.
- ▶ **Net electricity output:** 23.2 MW_e
- ▶ **Electricity generation:** approx. 188 million kWh p.a.
- ▶ **Optional combined heat and power generation (CHP)**

Broad and secure revenue base

- ▶ More than 1 million tonnes of waste wood in the catchment area
- ▶ State support of the production of renewable energy from biomass

Biomethane plant Staßfurt – third step towards building up a biomethane cluster in Saxony-Anhalt

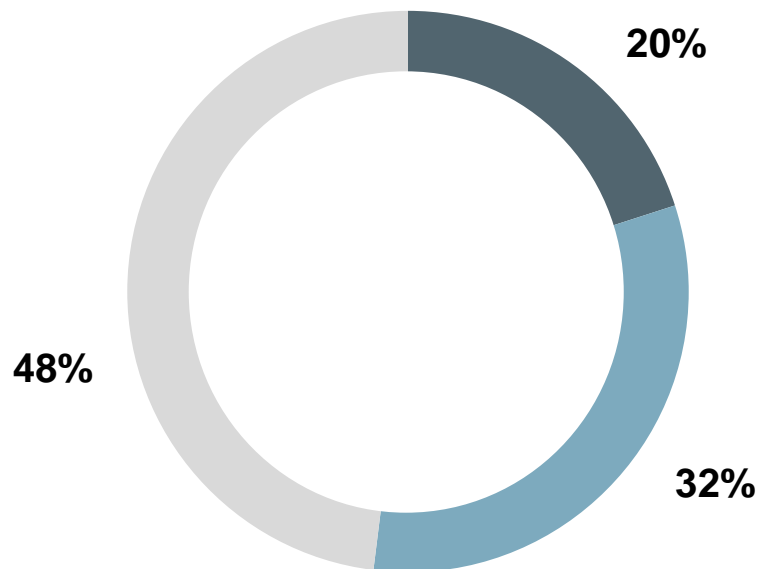
Biomethan at Staßfurt location

- ▶ **Launch of construction work:** June 2014
- ▶ **Launch of operations:** Mid of 2015
- ▶ **Investment:** roughly Euro 14 million
- ▶ **Output:** approx. 3 MW_e
- ▶ **Biogas production:** 63.5 million kWh p.a.
(equivalent to electricity consumption of 6,000 families and heating energy need of 1,200 households)
- ▶ **Gas output:** 695 Nm³ per hour of biomethane
(in natural gas quality)
- ▶ **Raw materials requirement:** approx. 62,000 tonnes p.a.,
mainly maize silage, sugar beet, cuttings and winter crops
- ▶ **CO₂ savings:** 20,000 t/a
- ▶ **Planned operating term:** 26 years

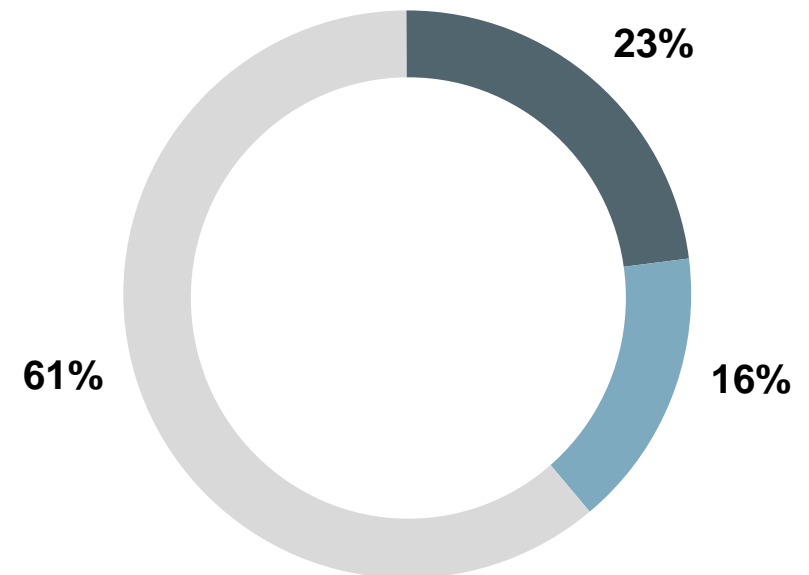


High priority for renewable energies at MVV Energie Group

Electricity generation of the MVV Energie Group
in Germany in FY 2012/13: 3.7 bn kWh



Net electricity generation
in Germany in 2012: 583 bn kWh ¹



- Electricity from renewable energies, including biomass cogeneration and biogenic share of waste
- Electricity from cogeneration
- Other electricity generation

¹ Sources: Association of the German Energy and Water Industries (BDEW), Prognos AG, transmission grid operators and own calculations (preliminary)

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OUTLOOK

Outlook for 2013/14 financial year

▶ **Sales (excluding energy taxes) to approximately match the previous year's figure of Euro 4.0 billion**



▶ **Adjusted EBIT to amount to between Euro 170 million and Euro 175 million**

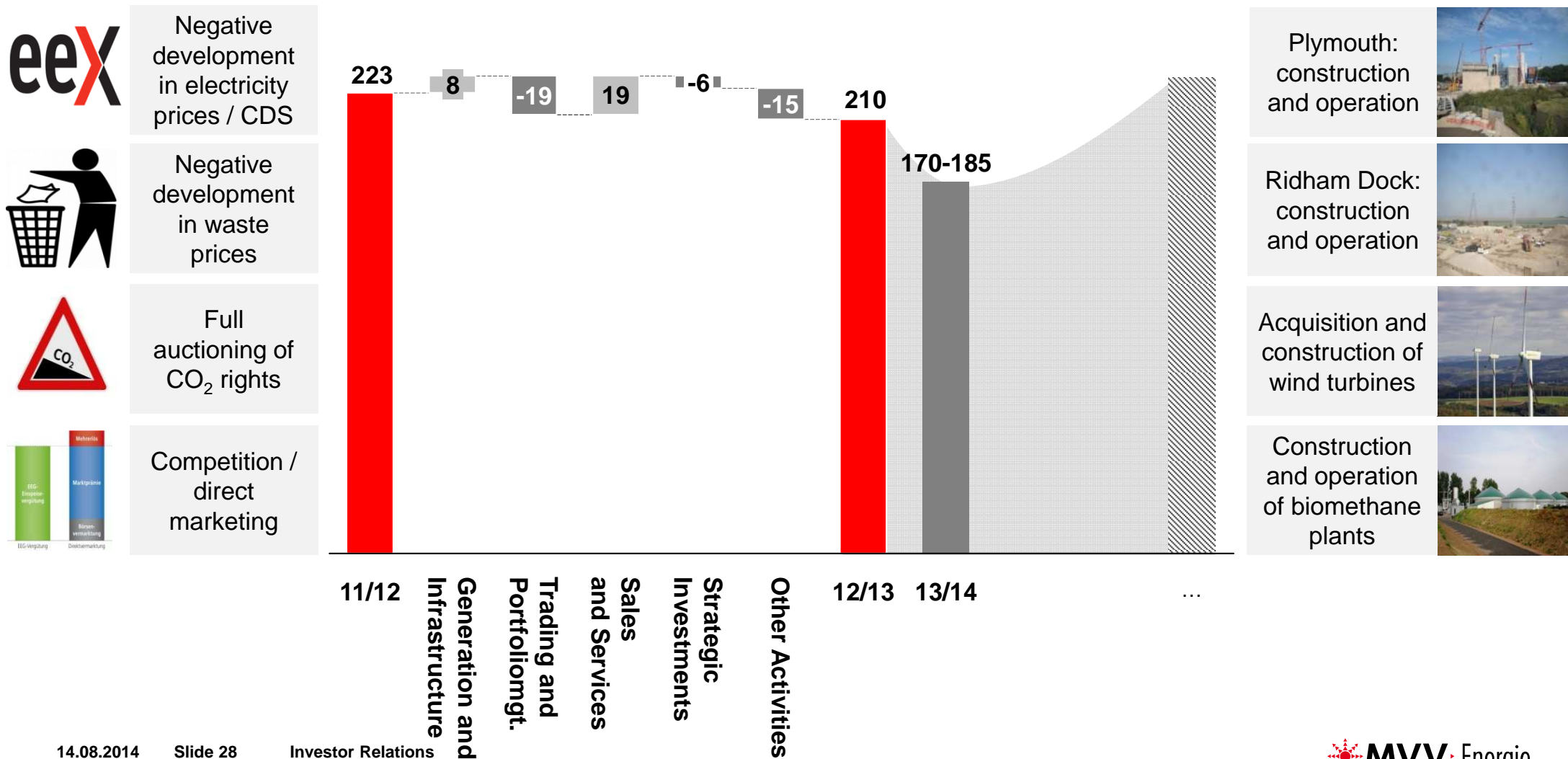


▶ **Key drivers of adjusted EBIT forecast:**

- Ongoing low margin achieved from generating electricity from hard coal (clean dark spread)
- Low wholesale electricity and waste prices
- Costs of CO₂ rights previously allocated free of charge
- Weather conditions
- Start-up costs for our growth investments

Adjusted EBIT of MVV Energie Group – development and outlook

Euro million



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FINANCIAL CALENDAR

Financial calendar 2014/15

- ▶ 11 Dec 2014 2013/14 Annual Report
- ▶ 11 Dec 2014 Annual Results Press Conference and Analysts` Conference in Frankfurt/Main
- ▶ 12 Feb 2015 Financial Report for 1st Quarter of 2014/15
- ▶ 13 Mar 2015 Annual General Meeting in Mannheim
- ▶ 12 May 2015 Financial Report for 1st Half of 2014/15 and Analysts` Conference Call
- ▶ 14 Aug 2015 Financial Report for 1st Nine Months of 2014/15 and Analysts` Conference Call
- ▶ 10 Dec 2015 2014/15 Annual Report
- ▶ 10 Dec 2015 Annual Results Press Conference and Analysts` Conference in Frankfurt/Main

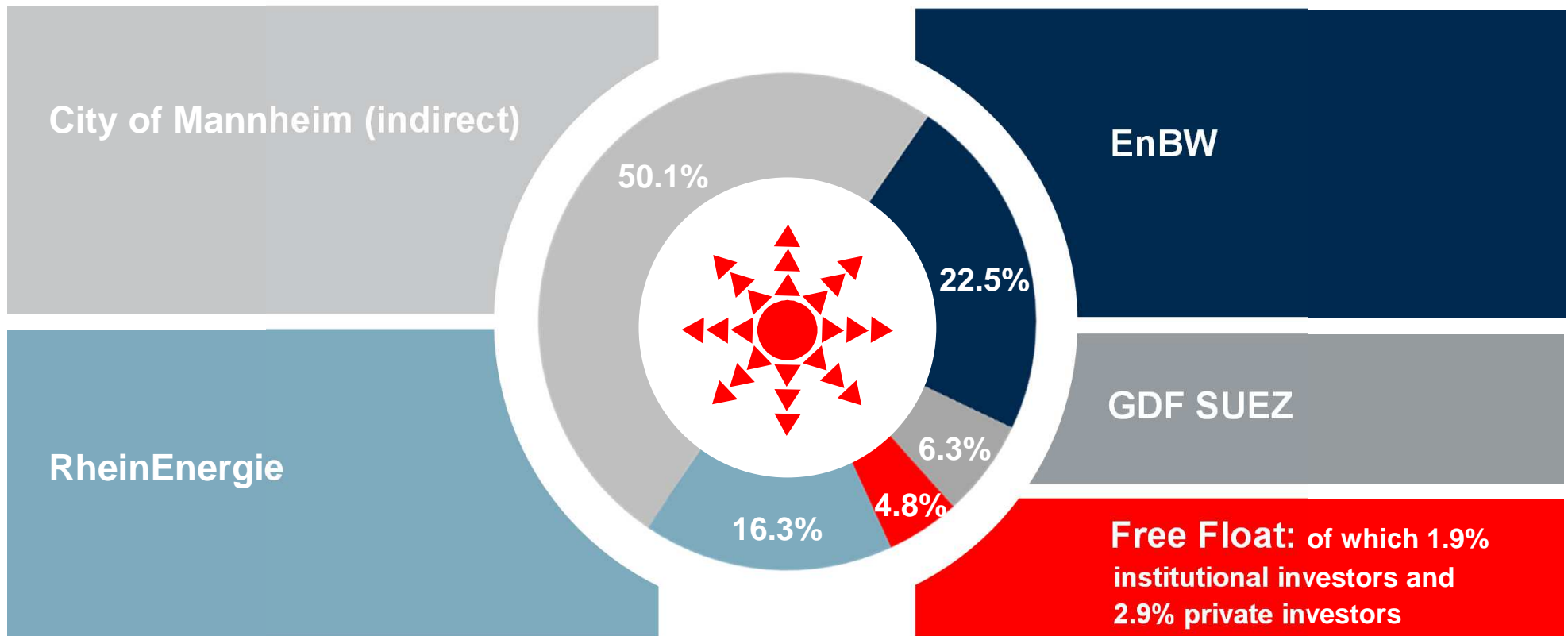
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BACK UP

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THE SHARE OF MVV ENERGIE AG

Current shareholder structure and key figures of MVV Energie AG



▶ **No. of shares:**
65.907 million

▶ **Ø daily turnover:**
4,121 shares in 2012/13 FY

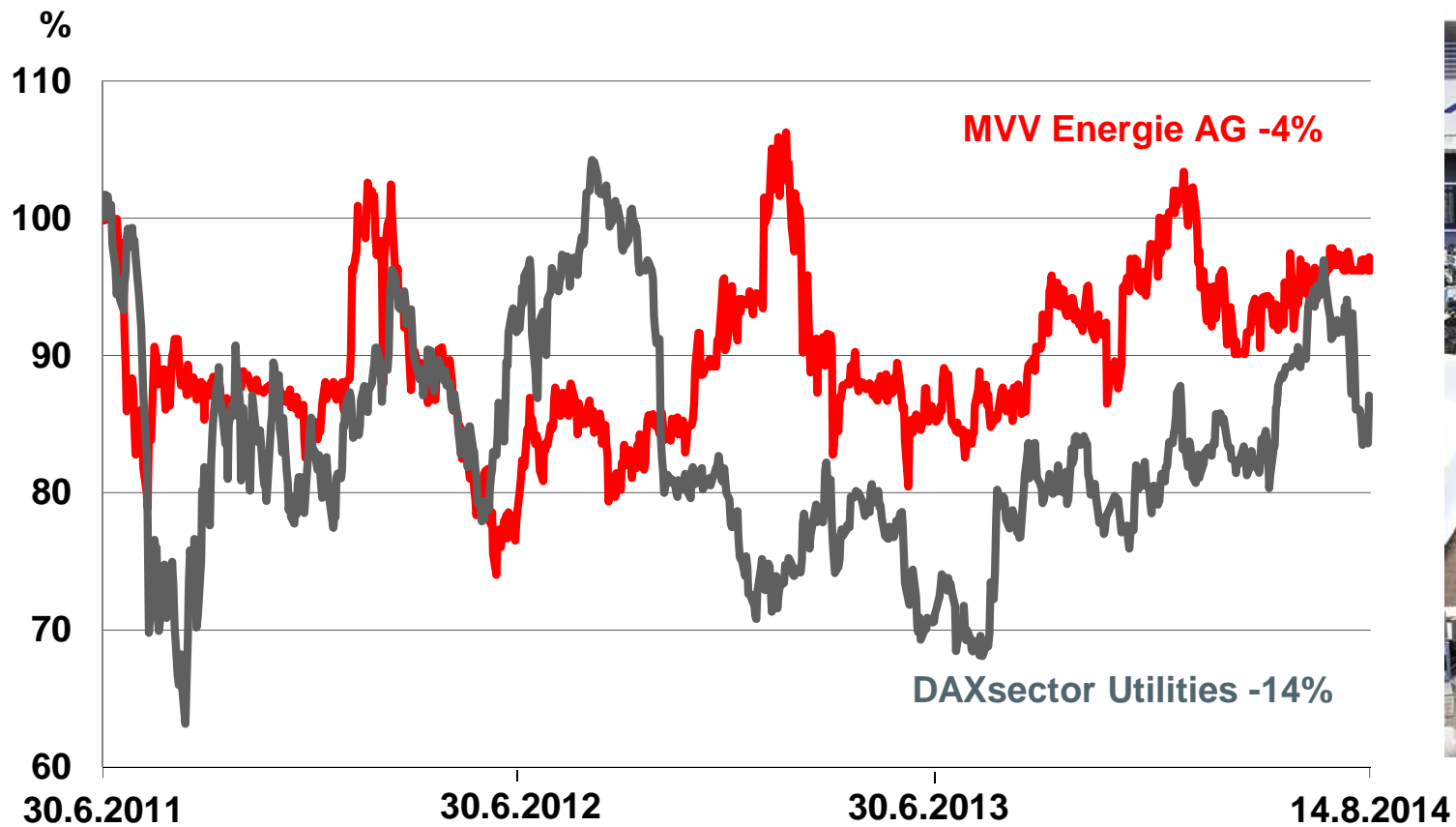
▶ **Market capitalisation:**
Euro 1,555 million
(Closing price on 14 August
2014: Euro 23.60 Euro)

▶ **Free float:**
Euro 75 million

Performance comparison of the MVV Energie AG share

ISIN DE000A0H52F5

XETRA Trading



Share chart as performance comparison (including dividend payments in March 2010, 2011, 2012 and 2013) with DAXsector Utilities

High dividend distribution in past eight years

Dividend	2012/13	2011/12	2010/11	2009/10	2008/09	2007/08	2006/07	2005/06
Dividend/Share (Euro)	0.90 ¹	0.90	0.90	0.90	0.90	0.90	0.80	0.80
Total dividend ² (Euro million)	59.3	59.3	59.3	59.3	59.3	59.3	52.7	44.6
Closing price on 30.9. (Euro)	22.35	21.39	23.86	29.00	30.83	33.20	29.49	23.23
Dividend yield ³ (%)	4.0	4.2	3.8	3.1	2.9	2.7	2.7	3.4

1 subject to approval by the Annual General Meeting on 14 March 2014

2 with dividend entitlement in FY 2005/06: 55.8 million shares; since FY 2006/07: 65.9 million shares

3 dividend yield based on respective closing price in XETRA trading on 30 September

Advantages for our shareholders

Well balanced portfolio

- ▶ Across major steps of the value added chain,
- ▶ across regions and
- ▶ across customers

Green & clean

- ▶ No nuclear exposure in own generation
- ▶ Wind onshore, biomass and biomethane
- ▶ CHP and district heating
- ▶ R&D: Smart metering

Ambitious capex programme until 2020

- ▶ Euro 3 billion in total of which
 - Euro 1.5 billion in growth
 - Euro 1.5 billion in replacement investments

Solid balance sheet

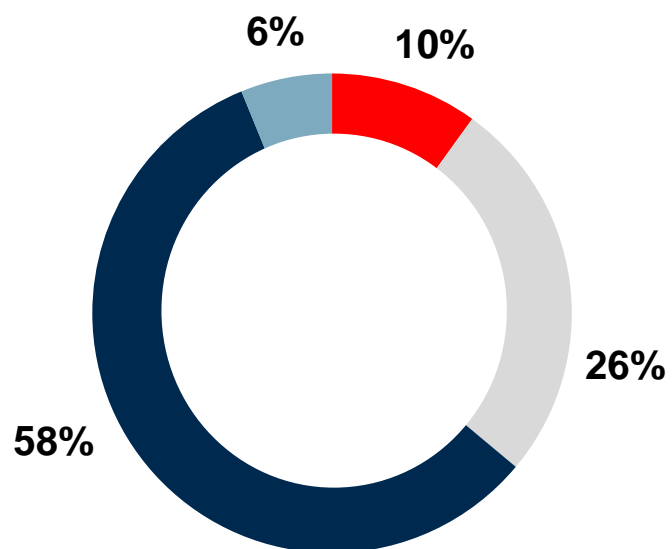
- ▶ Long term investment horizon matched with long term maturities
- ▶ High equity ratio of 34.5%

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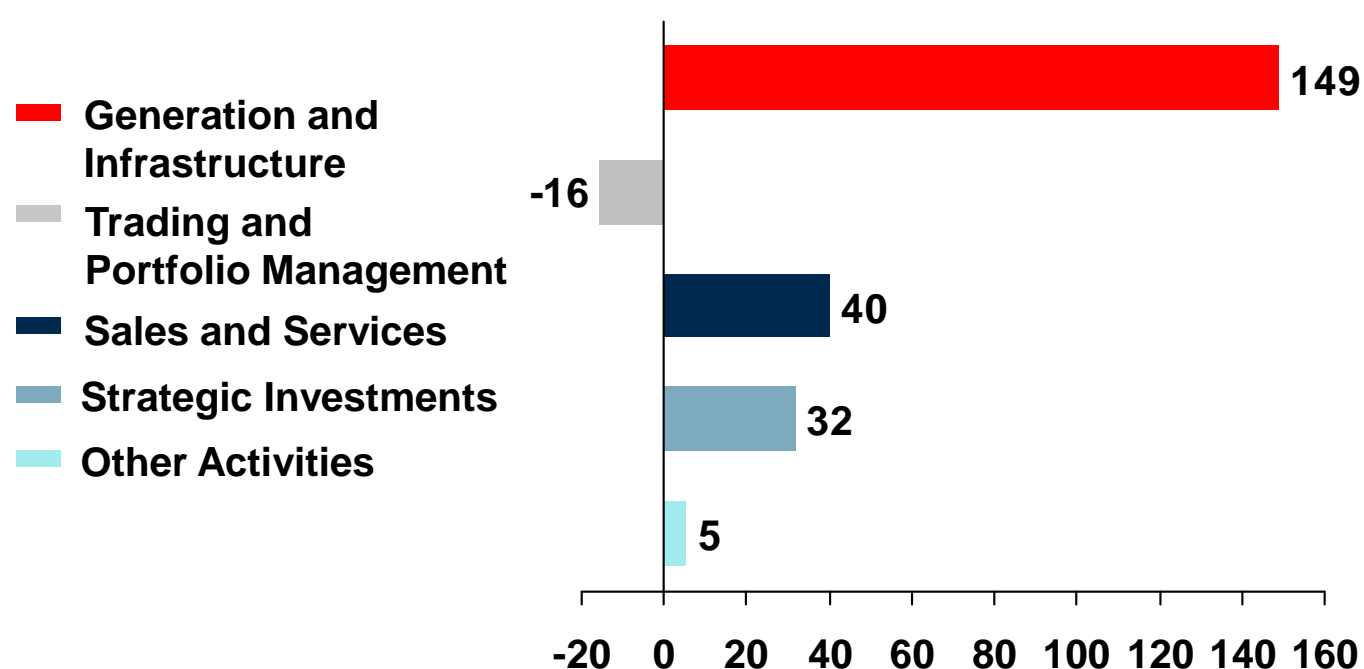
ADDITIONAL FINANCIAL INFORMATION

Sales and adjusted EBIT by reporting segments

Share of sales in 2012/13 FY



Adjusted EBIT in 2012/13 FY (Euro million)



Sales and adjusted EBIT performance by quarter

in Euro million	2012/13	2011/12	% change
1 st Quarter	1 082	1 018	+6
2 nd Quarter	1 149	1 072	+7
3 rd Quarter	935	888	+5
4 th Quarter	878	917	-4
Sales in the financial year	<u>4 044</u>	<u>3 895</u>	+4
1 st Quarter	88	74	+19
2 nd Quarter	92	106	-13
3 rd Quarter	39	46	-15
4 th Quarter	-9	-3	> -100
Adjusted EBIT in the financial year	<u>210</u>	<u>223</u>	-6

Electricity and heating energy turnover in the 2012/13 financial year

	2012/13	2011/12	% change
Electricity in kWh million	25 817	28 283	-9
of which Generation and Infrastructure	61	93	-34
of which Trading and Portfolio Management	14 489	15 750	-8
of which Sales and Services	10 733	11 071	-3
of which Strategic Investments	534	1 369	-61
District heating in kWh million	7 510	6 888	+9
of which Generation and Infrastructure	402	274	+47
of which Trading and Portfolio Management	–	673	-100
of which Sales and Services	5 901	4 772	+24
of which Strategic Investments	1 207	1 169	+3

Gas and water turnover and combustible waste delivered in the 2012/13 financial year

	2012/13	2011/12	% change
Gas in kWh million	25 078	17 418	+44
of which Generation and Infrastructure	60	4	> +100
of which Trading and Portfolio Management	16 313	7 762	> +100
of which Sales and Services	7 482	7 567	-1
of which Strategic Investments	1 223	2 085	-41
Water in m ³ million	47.4	52.9	-10
Combustible waste delivered in tonnes 000s	1 888	1 897	0

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INVESTMENTS

Municipal utility companies and major locations of the MVV Energie Group



MVV Energie Municipal Utilities

- 1 STADTWERKE KIEL
- 2 EVO
- 3 STADTWERKE INGOLSTADT
- 4 Köthen Energie
- 5 STADTWERKE SINSHEIM
- 6 STADTWERKE BUCHEN
- 7 Stadtwerke Walldorf GmbH
Energie · Wasser · Bäderpark
- 8 Stadtwerke Schwetzingen

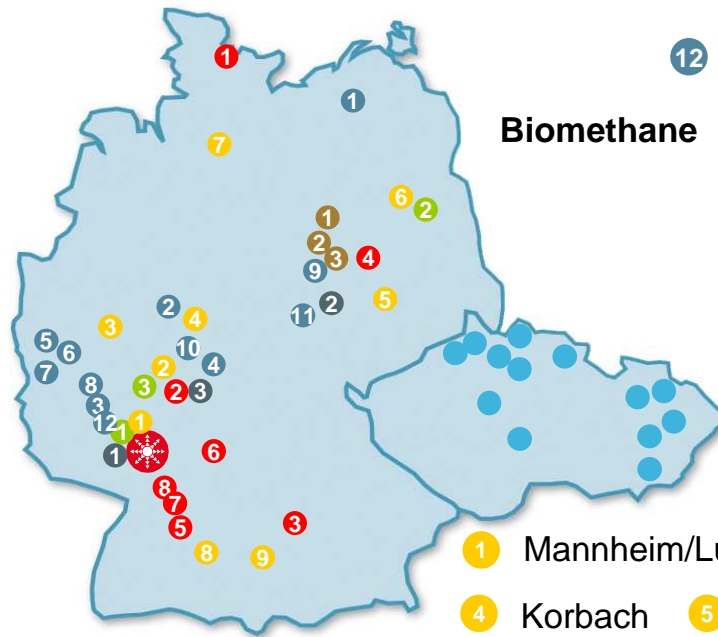
MVV Energie – Renewable energies

Wind farms

- 1 Plauerhagen
- 2 Massenhausen
- 3 Kirchberg
- 4 Dirlammen
- 5 Güsten
- 6 Bergheim
- 7 Jülicher Börde
- 8 Wirfus
- 9 Holdenstedt-Bornstedt
- 10 Rabenau
- 11 Rastenberg I+II
- 12 Hungerberg

Biomethane

- 1 Klein Wanzleben
- 2 Kroppenstedt
- 3 Staßfurt ¹



MVV Energie · CZ

13 locations for district heating supply

MVV Energie · Enamic

- 1 Mannheim/Ludwigshafen
- 2 Bad Homburg v.d.H.
- 3 Solingen
- 4 Korbach
- 5 Leipzig
- 6 Berlin
- 7 Hamburg
- 8 Tübingen
- 9 Gersthofen

MVV Energie · Umwelt

Biomass power plant

- 1 Mannheim
- 2 Königs Wusterhausen
- 3 Wicker
- 4 Ridham Dock ¹

Waste utilisation

- 1 Mannheim
- 2 TREA Leuna
- 3 Offenbach
- 4 Plymouth ¹

1 under construction

We are making good progress with implementing our growth targets – Examples of projects implemented since MVV 2020



Successful entry into UK market



Development of wind power portfolio



Entry into biomethane business



Expansion in district heating Block 9 GKM



Expansion of district heating in Czech Republic



Joint district heating project in Ingolstadt



Expansion in energy efficiency and contracting

Kirchberg wind farm – successful expansion of wind energy



Kirchberg location in Rhineland-Palatinate

- ▶ **Launch of operations:** successively from December 2011
- ▶ **Investment:** Euro 84 million
- ▶ Joint venture with juwi
- ▶ 23 E-82 E2 type wind turbines (Enercon)
- ▶ **Hub height:** 138 metres
- ▶ **Output:** 53 MW_e
- ▶ **Electricity output:** 125 kWh million p.a. (equivalent to consumption of 35,000 households)
- ▶ **CO₂ savings:** 100,000 tonnes a year

District heating storage facility at Grosskraftwerk Mannheim (GKM)



District heating storage facility at GKM

- ▶ **Launch of operations:** Autumn 2013
- ▶ **Investment:** Euro 27 million
- ▶ **Height:** 36 metres
- ▶ **Diameter:** 40 metres
- ▶ **Capacity:** 43,000 cubic metres
- ▶ **Usable heat content:** 1.5 million kWh
- ▶ **Economic ownership and operations management:** MVV Energie
- ▶ **Construction and operation:** GKM

Biomethane plant Kroppenstedt – second step towards building up a biomethane cluster in Saxony-Anhalt

Biomethane plant at Kroppenstedt location

- ▶ **Launch of construction work:** December 2012
- ▶ **Launch of operations:** January 2014
- ▶ **Investment:** roughly Euro 14 million
- ▶ **Output:** approx. 3 MW_e
- ▶ **Biogas production:** 63.5 million kWh p.a.
(equivalent to electricity consumption of 6,000 families and heating energy need of 1,200 households)
- ▶ **Gas output:** 695 Nm³ per hour of biomethane
(in natural gas quality)
- ▶ **Raw materials requirement:** approx. 68,500 tonnes p.a., mainly cow slurry/cow dung, maize silage and sugar beet
- ▶ **CO₂ savings:** 20,000 tonnes a year
- ▶ **Planned operating term:** 26 years



Launch of biomethane business at Klein Wanzleben location

Biomethane plant at Klein Wanzleben location

- ▶ **Launch of construction work:** end of May 2011
- ▶ **Launch of operations:** July 2012
- ▶ **Investment:** Euro 12.6 million
(of which MVV Energie: Euro 9.4 million)
- ▶ **Output:** approx. 3 MW_e
- ▶ **Biogas production:** 63 million kWh p.a.
(equivalent to electricity consumption of 6,000 families and heating energy need of 1,200 households)
- ▶ **Gas output:** 695 Nm³ per hour of biomethane
- ▶ **Raw materials requirement:** approx. 47,500 tonnes p.a. of maize silage, 4,000 tonnes p.a. of sugar beet plus 10,000 tonnes p.a. of sugar beet chips for process heat production (own consumption)
- ▶ **CO₂ savings:** 20,000 tonnes a year
- ▶ **Planned operating term:** at least 20 years



Decentralised energy supply – EVO wood pellet plant in Offenbach



Wood pellet plant in Offenbach

- ▶ **Launch of operations:** May 2011
- ▶ **Investment in wood pellet plant, including adjacent biomass cogeneration plant:**
approx. Euro 17 million
- ▶ Wood pellet production from shavings and waste timber in 2012/13 FY: 45,000 tonnes
- ▶ Possibility of doubling wood pellet production in further expansion stage
- ▶ Substitute fuel for up to 50,000 tonnes of hard coal at EVO's cogeneration plant
- ▶ **CO₂ savings:** up to 80,000 tonnes p.a.

Implementation: Successful expansion of district heating – Ingolstadt



Ingolstadt joint district heating project

- ▶ **Launch of operations:** summer 2011
- ▶ Bavaria's largest waste heat and district heating project
- ▶ **Investment:** around Euro 23 million
- ▶ Joint project with Petroplus refinery, City of Ingolstadt and AUDI AG
- ▶ Construction of a 5.3 km district heating pipeline
- ▶ **Thermal energy output:** 300 million kWh p.a.

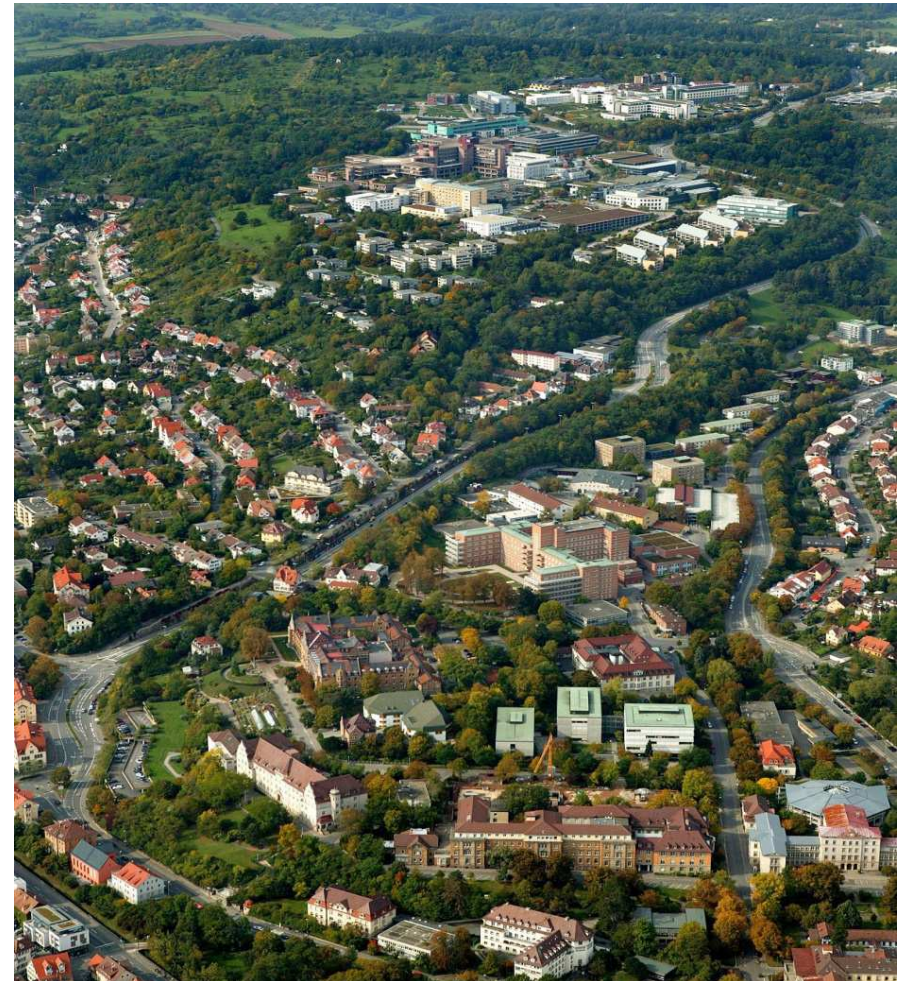
Enhanced energy efficiency and contracting – Tübingen University Hospital

Tübingen University Hospital

- ▶ **Assumption of operations:** July 2010
- ▶ Conversion of 40 year-old heat power plant from oil and gas to wood pellet operations
- ▶ **Launch of operations:** March 2013
- ▶ **Investments:** Euro 12 million
- ▶ **Contractual term:** 20 years

Technical data

- ▶ **2 wood boilers:** each 10 MW_t
- ▶ **Peak load boiler:** 17 MW_t + reserve boiler 32 MW_t
- ▶ **CO₂ savings:** 20,000 tonnes a year, or up to 98%



TERMIZO – Heating energy from waste

TERMIZO in the Czech Republic

- ▶ TERMIZO is a waste-fired heating energy plant that meets the highest European standards
- ▶ **Purchase price:** approx. Euro 21 million
- ▶ All of the heating energy produced is supplied to Teplarna Liberec
- ▶ Single-line plant concept with modern flue gas cleaning



Technical data

- ▶ **Thermal energy output:** 38.3 MW_t
- ▶ **Electricity generation:** 4.0 MW_e
- ▶ **Waste incineration capacity:** 106,000 tonnes p.a.

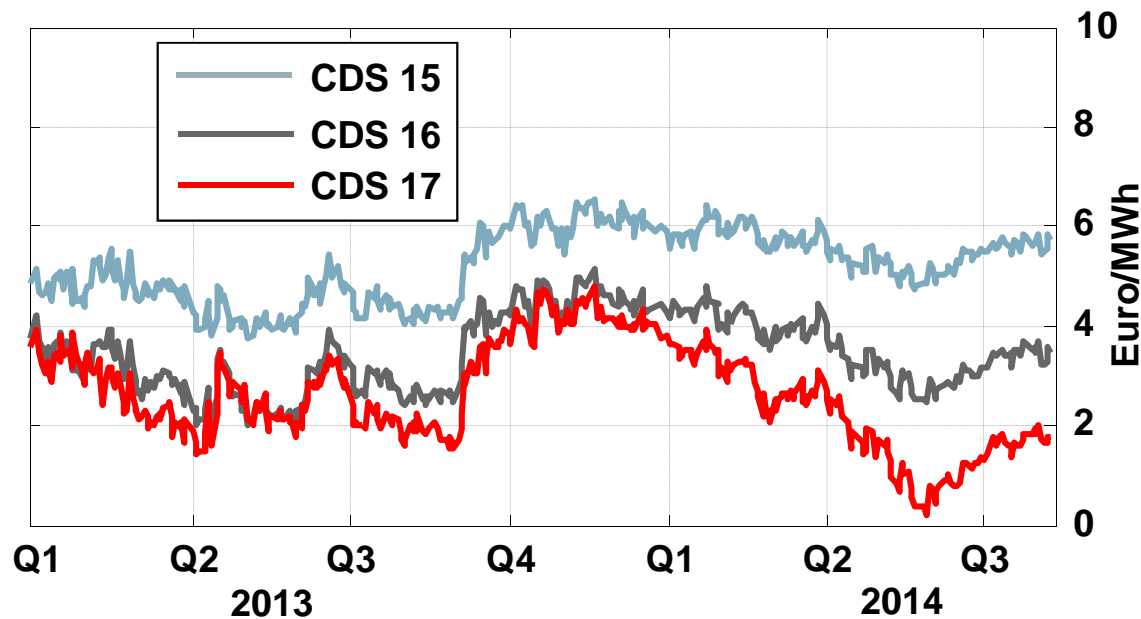
Grosskraftwerk Mannheim (GKM)

Grosskraftwerk Mannheim (GKM)

- ▶ **Launch of operations** at Block 9: 2015
- ▶ **Shareholder structure** in GKM: 28% MVV Energie, 40% RWE, 32% EnBW
- ▶ **Gross electricity generation capacity** at GKM: 1,675 MW_e
- ▶ **Gross electricity generation capacity** at new Block 9: 911 MW_e
- ▶ **Fuel efficiency** of new Block 9: up to 70%
- ▶ District heating supply secure, as Blocks 3 and 4 to remain in operation until Block 9 is online
- ▶ Immission protection approval to use Block 3 as “**cold reserve**” in winter months



The Clean Dark Spread (CDS) development has a significant impact on the MVV Energie Group



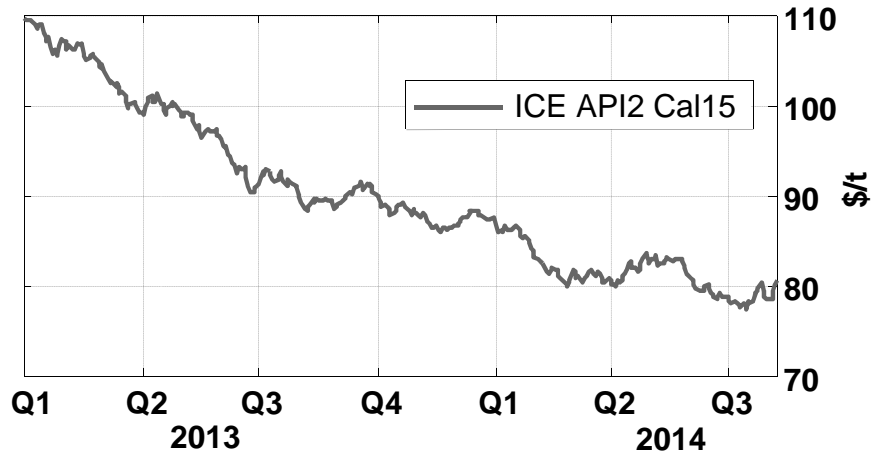
Future CDS development will be influenced by different markets and political decisions:

German power generation

- Nuclear exit
 - Renewable generation (wind, solar)
 - New conventional generation
- ▶ Global coal markets/FX
- ▶ Carbon price level

Energy price curves

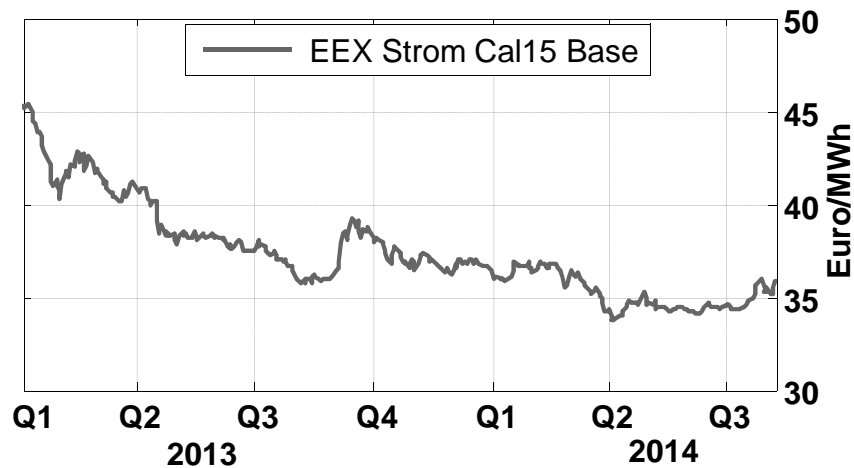
Coal



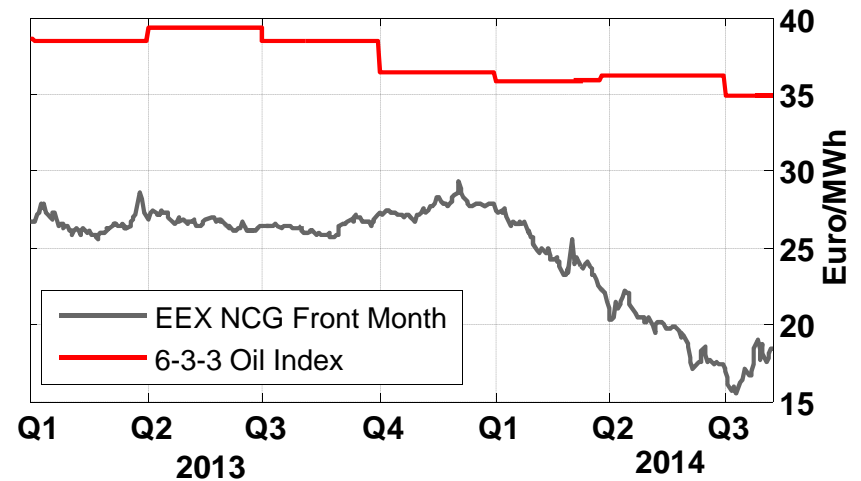
CO₂



Electricity



Gas



MVV ENERGIE
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