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Regulation of Austrian Gas networks

Focus: regulatory accounts and recalculation mechanisms

February 10, 2016

General Information

Austrian Gas networks



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- Full liberalization of the gas market
 - October 1st, 2002
 - No regulation of supply-tariffs, only transit/distribution tariffs
- 21 distribution companies
- Transit-line operators
 - TAG
 - GCA
- Incentive-based model (for gas DSOs) is comparable to the electricity model
 - Applies to all gas distribution network operators
 - Cutback of inefficiencies within 10 years (benchmarking as basis)
 - 2 regulatory periods (5 years each)
 - Start 01.02.2008
 - 1st period: 2008-2012
 - 2nd period: 2013-2017
- Tariff calculation method for TSOs
 - Updated every 4 years

Gas DSOs

Key parameters 2nd period



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Regulatory parameters	2nd regulatory period
Cost Base	TOTEX (2011)
Length of regulatory period	5 years (January 2013 – December 2017), 2 periods
Cutback of inefficiencies	within 10 years
Sectorial productivity development (technical change)	1.95% p.a.
Benchmarking	ex post, based on TOTEX, weighting of DEA and MOLS results
X-Factor	Cost-alignment after 1st period, efficiency target remained unchanged, recalculation of X-factor for the 2nd period
Rate of return	6.42% p.a. (fixed for the regulatory period), based on a WACC approach (nominal, pre-tax)
RAB	Tangible and intangible assets (no working capital included)
Compensation for inflation	Network operator price index (calculated on the basis of consumer price index, wage index, construction price index)
Change in service provision	2 Expansion factors: <ul style="list-style-type: none">– Investment factor: CAPEX related– Operating cost factor: OPEX related
Volume of distributed energy changes	Regulatory account (yearly adjustment)
Time-lag in remuneration of costs (t-x problem)	Treated via a recalculation mechanism
Q-Element	Included in the regulatory formula, but set to zero

Source: <https://www.e-control.at/documents/20903/-/-/10bba9e5-c533-441c-8500-2c83689e9fa4>

Gas DSOs

Regulatory account (1)



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- Covers volume effects due to the t-2 principle (higher or lower revenues)
- Deviations are deducted or added in the next tariff calculation
- Is active since 2014

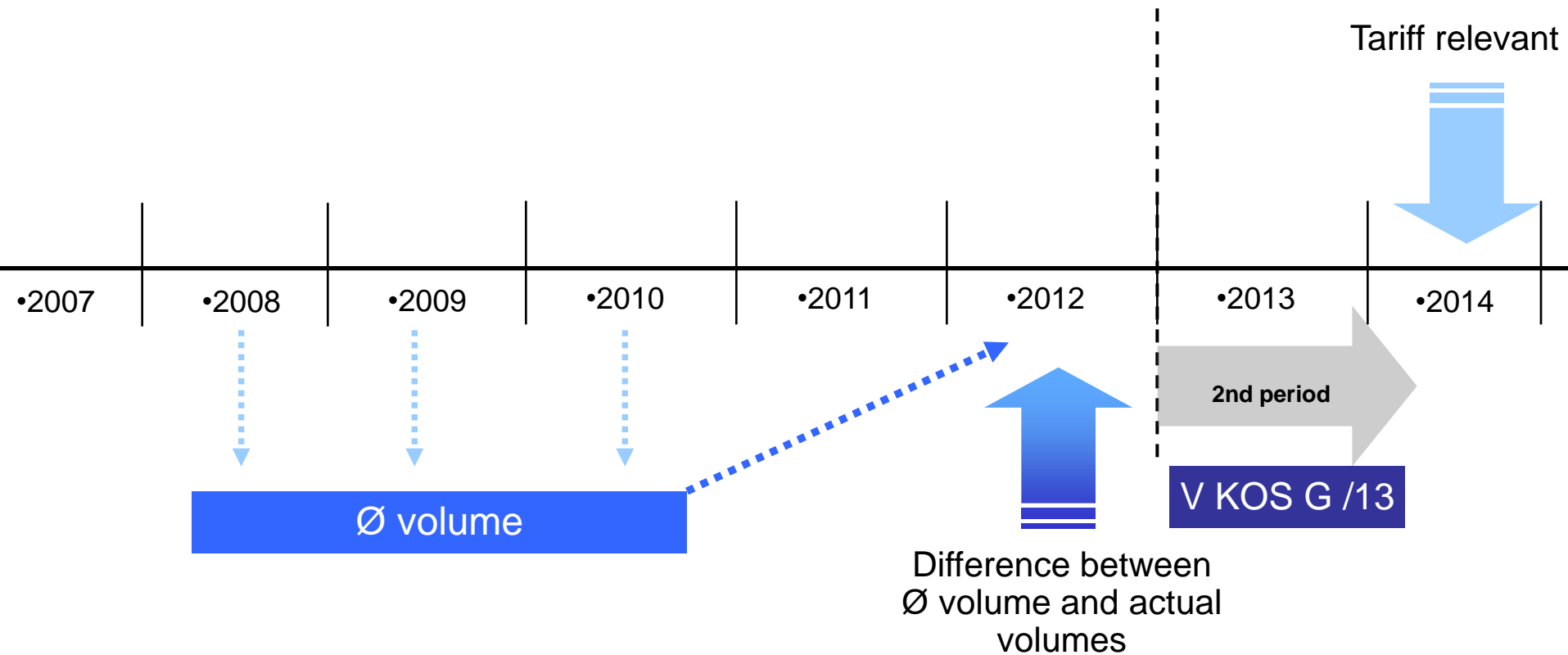
Gas DSOs

Regulatory account (2)



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- Alignment of tariffication-volumes for 2012 (3yrs average of latest available data) with actual volumes from 2012



Gas TSOs

Key parameters “tariff methodology”



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Regulatory parameters	
Cost Base	Re-evaluated assets, planned investments, operational costs
Length of regulatory period	4 years
Cutback of inefficiencies	-
Sectorial productivity development (technical change)	2.5% p.a. on influenceable operational costs
Benchmarking	-
Rate of return	A ratio of 40% equity to 60% debt is considered as a norm-capital structure Cost of debt (4.72%) and cost of equity (9.332%) are handled separately, individual risk premiums apply based on the calculated capacity risk
RAB	Replacement values for equity financed assets, book values for debt financed assets, planned values for investments during the period
Change in service provision	Planned values
Recalculation mechanism	Differences between planned and actual values <ul style="list-style-type: none">– CAPEX (depreciation, financing costs, norm capital structure)– Energy Cost (incl. CO2-Cost)– Costs of Regulation (MAM-costs)– ISO-ITO-costs

Source: https://www.e-control.at/documents/20903/443907/Methodbeschreibung_FLU_en.pdf/8075c6ed-c85e-4d5b-b0d7-cd613e3e1015

Gas TSOs

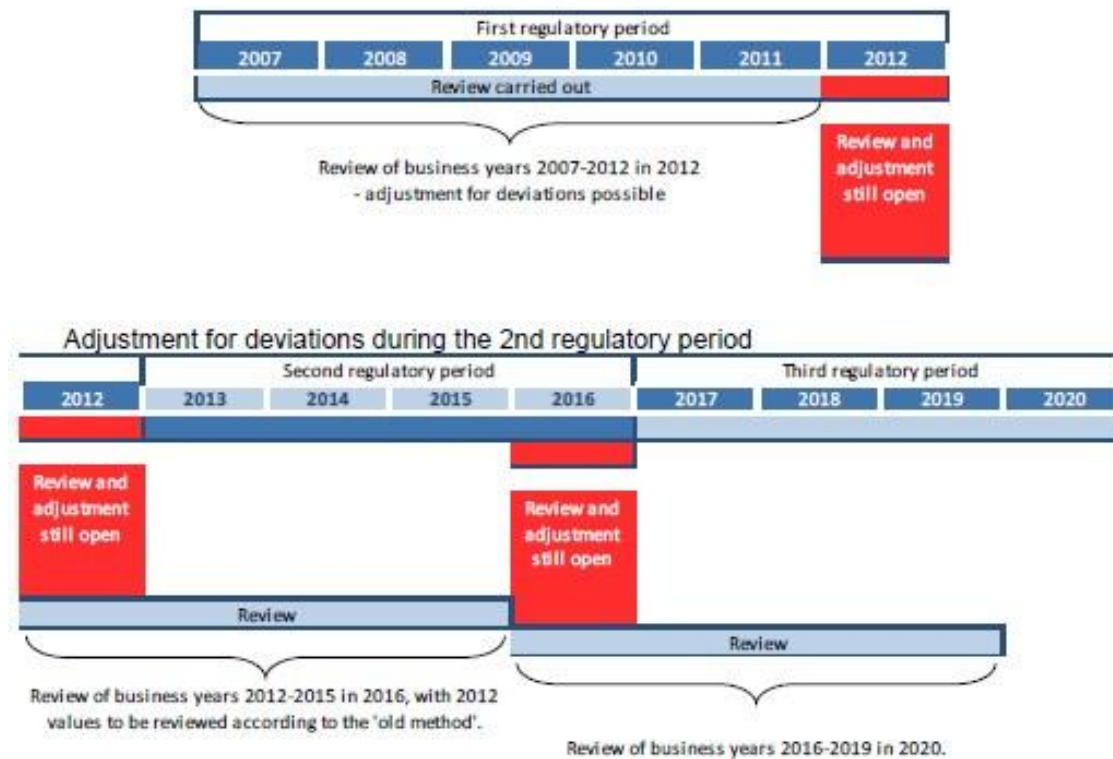
Recalculation mechanism



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Recalculating of planned vs. actual costs (mainly CAPEX and energy costs) is necessary after 4 years

- For comparability, the differences of actual and planned costs during each year are compounded (cost of debt rate) to the first year of the next regulatory period.
- As the last business year of a regulatory period is still ongoing when the review is carried out, the adjustment relating to that year can only be taken into account in the course of the review of the following regulatory period, as is shown in the figures below:



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Backup

Scope and basic principles of the method



Overview

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- General principals
 - The method applies to all entry and exit points as well as interconnection points of transmission line(s)
 - Includes reasonable costs of the project
 - Costs must be transparent
 - Costs must correspond to those of an efficient and structurally comparable system operator
 - Include an **appropriate rate of return**.
 - The costs must be presented to and approved by the regulatory authority (all data used in the calculation has to be provided).
 - Regulatory period of 4 years
 - Re- evaluation/calculation after 4 years for upcoming period

Scope and basic principles of the method



Cost-reflective calculation approach

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- The method takes account of reasonable costs for a project
- Extent of reasonable planned project-costs
 - Costs of operation
 - (Combustion) Energy
 - Maintenance
 - Development of transmission lines
 - Administration and marketing of capacities
 - Costs directly related to the installation and operation of metering equipment
 - Prorated costs for the market area manager

Elements of the Methodology

Overview



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- **Investments, Re-investments and Depreciation**
- **Capital structure / cost of capital**
- **WACC**
- **Operating Costs**
- **Individual Risk Premiums**
- **Other revenues and income**
- **Energy Costs**
- **Flow commitments**
- **Costs of the market area manager and of regulation**
- **Revenues from auctions, excess capacity use, interruptible transport contracts and oversubscription**

Elements of the Methodology

Investments, Re-investments and Depreciation



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- **Investments, Re-investments and Depreciation**
 - The method takes account of the planned capacity investments for the next four years
 - Investments have to be covered by the approved coordinated network development plan.
 - After four years, the NRA reevaluates for deviations between planned investments and actual investments.
 - Any such deviations in terms of capital costs are revised and taken into consideration when recalculating the costs.

Elements of the Methodology

Capital structure / cost of capital



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- The reasonable rate of return for calculating the cost of capital is based on the weighted average cost of capital (WACC) for a norm-capital structure and the income tax.
(Natural Gas Act 2011 - Section 82 para. 1 in connection with section 80 para. 3)
 - A ratio of 40% equity to 60% debt is considered a norm-capital structure.
 - The norm-capital structure must reflect overall industry aspects as well as significant factors of individual companies which undercut the equity or debt capital shares by more than 10%.
 - The capital structure applied is derived from the book values and must be substantiated by the company.
 - The values are reviewed by the regulatory authority

Elements of the Methodology

WACC



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- Cost of debt and cost of equity are handled separately
- Replacement values are applied for the equity-financed assets
(Different for DSOs)

- Cost of Debt

Cost of debt	
Risk-free rate	3.270%
Risk premium for debt capital	1.45%
Cost of debt (pre-tax)	4.720%

- Cost of Equity

Cost of equity	
Nominal risk-free rate	3.270%
Inflation rate	2.251%
Market risk premium	5.0%
Ungearred beta	0.325
Gearred beta with a 40% equity ratio	0.691
Real cost of equity (post-tax)	4.374%
Real cost of equity (pre-tax)	5.832%
Capacity risk premium	3.500%
Real cost of equity (pre-tax), incl. capacity risk premium	9.332%

Elements of the Methodology

Operating Costs



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- Operating costs are calculated for entire transmission system (without depreciation)
- Reasonable, audited operating costs of the previous four years are adjusted up to the time of calculation with 2.251% p.a. and subsequently, their average is determined
- The factors which can be controlled by a company are represented by an **average productivity offset of 2.5% p.a.**
- Reasonable costs incurred in implementing the third package are accepted unless they are one-time implementation costs (approved by the NRA)
- Based on the incentive regulation approach, deviations of actual from planned operating costs are not revised.

Elements of the Methodology

Individual Risk Premium & Other revenues and income



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Individual Risk Premium

- Apart from a general compensation of capacity risk as part of the cost of equity, additional individual risk premiums apply based on the calculated capacity risk.

Other revenues and income

- Regulated companies **must report on any revenues from additional transport-related services** for system users which are collected based on rates or charges set by ordinance
- **The allowed costs are then reduced accordingly**

Elements of the Methodology

Energy Costs & Flow commitments



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Energy Cost

- Listed separately from other operating costs
- Not subjected to productivity offset
- Included in the allowed costs and recalculated after four years at their actual values.

Flow Commitments

- According to the Gas Market Model Ordinance 2012, flow commitments must be procured through non-discriminatory and transparent procedures under appropriate conditions.
- The related reasonable costs are included in the allowed costs (negative incentives have to be avoided)
- Flow commitments related to oversubscription are reviewed and considered in the allowed cost base only to the extent they were compensated for (10%).

Elements of the Methodology

Costs of the market area manager and of regulation



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- In accordance with section 74 para. 1 Natural Gas Act 2011, the method includes prorated reasonable costs of the market area manager
- The cost of regulation is included in the prorated market area manager costs assigned to each TSO according to section 32 para. 1 E-Control Act
- **No productivity offset applied.**

Elements of the Methodology

Revenues from auctions, excess capacity use, interruptible transport contracts and oversubscription



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- Surplus revenues from auctions as well as revenues from excess capacity use, interruptible transport contracts and oversubscription **are not considered in the cost review process.**
- **Surplus revenues from auctions are to be used as provisions** available for capacity expansion measures undertaken while this method applies. (use is verified by cost audits)
 - **Used** - Costs allowed for the following period are not reduced.
 - **Not used** - either reduce costs in recalculation or are kept available for investment in later regulatory periods.
- Same procedure for revenues derived from marketed capacities which were not considered in the accounted volumes.
- Overall revenues in the amount of 15% of the allowed costs remain with the TSO
 - Max of 40% of the revenues from interruptible transport contracts
 - Max of 90% of the net revenues from oversubscription mechanisms
 - Based on the Regulation (EC) No 715/2009
- Revenues are reviewed by the regulatory authority.



Further Points

- Volume situation
 - the TSO carries the marketing risk of volumes, for which it is compensated by the risk premium included in the cost of equity and an individual risk premium.
- Equalisation payments – section 70 para. 2 Natural Gas Act 2011
- Contract terms
- Firm transports
- Interruptible transports



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