

# Relevant parameters and key points of incentive-based regulation in Austria (electricity distribution)



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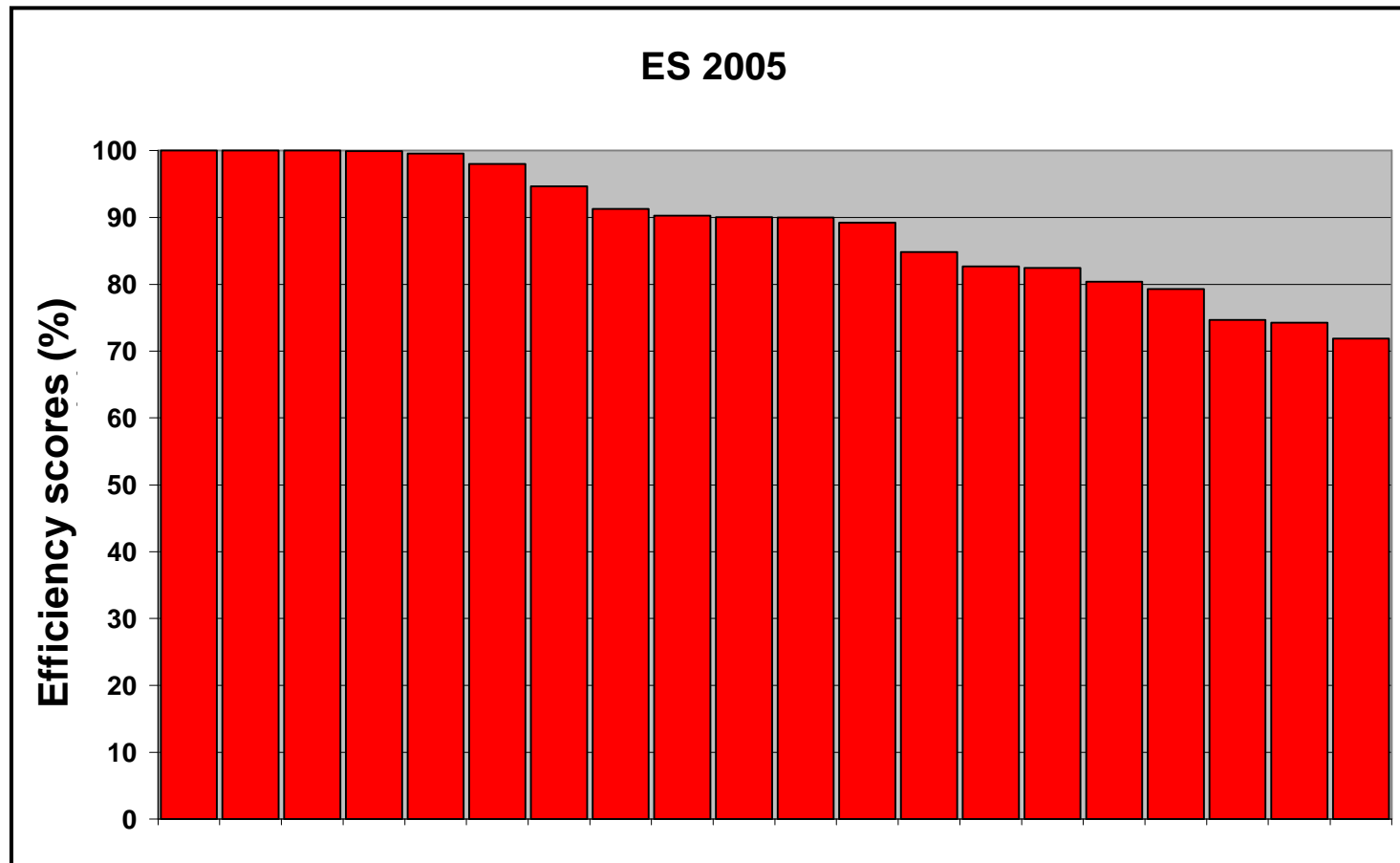
| Parameters  | 1. Regulatory period  | 2. Regulatory period   |
|---|---|--|
| Cutback of inefficiencies                                   | within 8 years  |  |
| Length of regulatory period                                 | 4 years   |  |
| Gen. productivity development                               | 1,95% p.a.  |  |
| Efficiency dependent offset                                 | max. 3,5% p.a. (floor at 74,76%)  |  |
| Compensation for inflation                                  | Network operator price index (NPI)  |  |
| Change in output volume                                     | $\frac{1}{2} \times \Delta M$ (revenue weighted volume growth)  | Investment factor (mark up +1,05%),<br>Operating cost factor |
| WACC  | 6.05%   | 7.025%   |
| RAB   | Incl. total assets  | Incl. tangible, intangible assets (no working capital)       |
| Transition from 1st to 2nd regulatory period (“Carry-Over”) | 50% split of efficiency gains between network operator and consumers;<br>Already 25% distributed to consumers by 2010 |  |

# Inefficiencies of network operators: comparison 2005



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$$ES_{2005} = DEA (I) \cdot 40\% + DEA (II) \cdot 20\% + MOLS \cdot 40\%$$

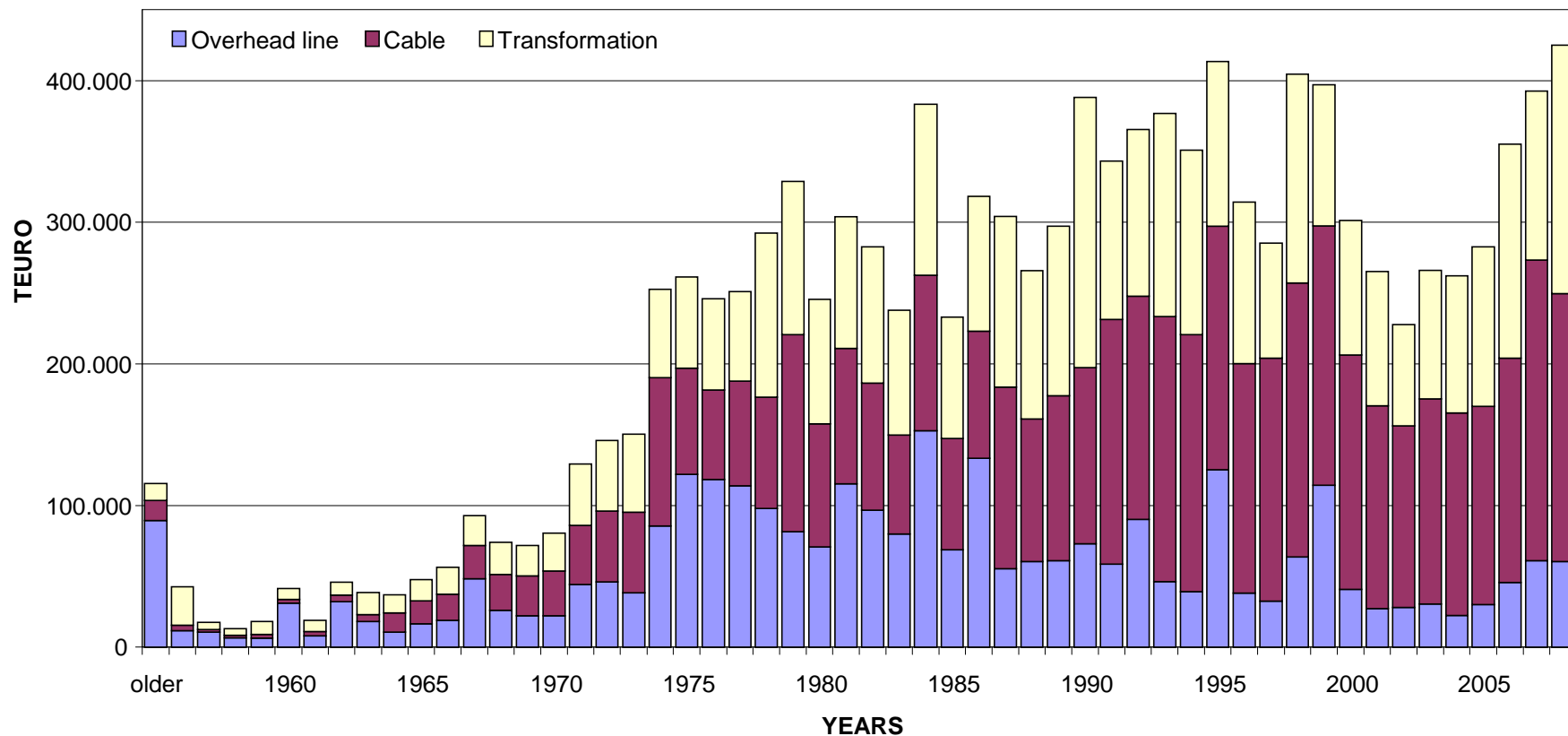


- 20 network operators in benchmarking sample
- average efficiency: 88.67%

# Intense investment behaviour during incentive-based regulation – highest volume of investments in 2009



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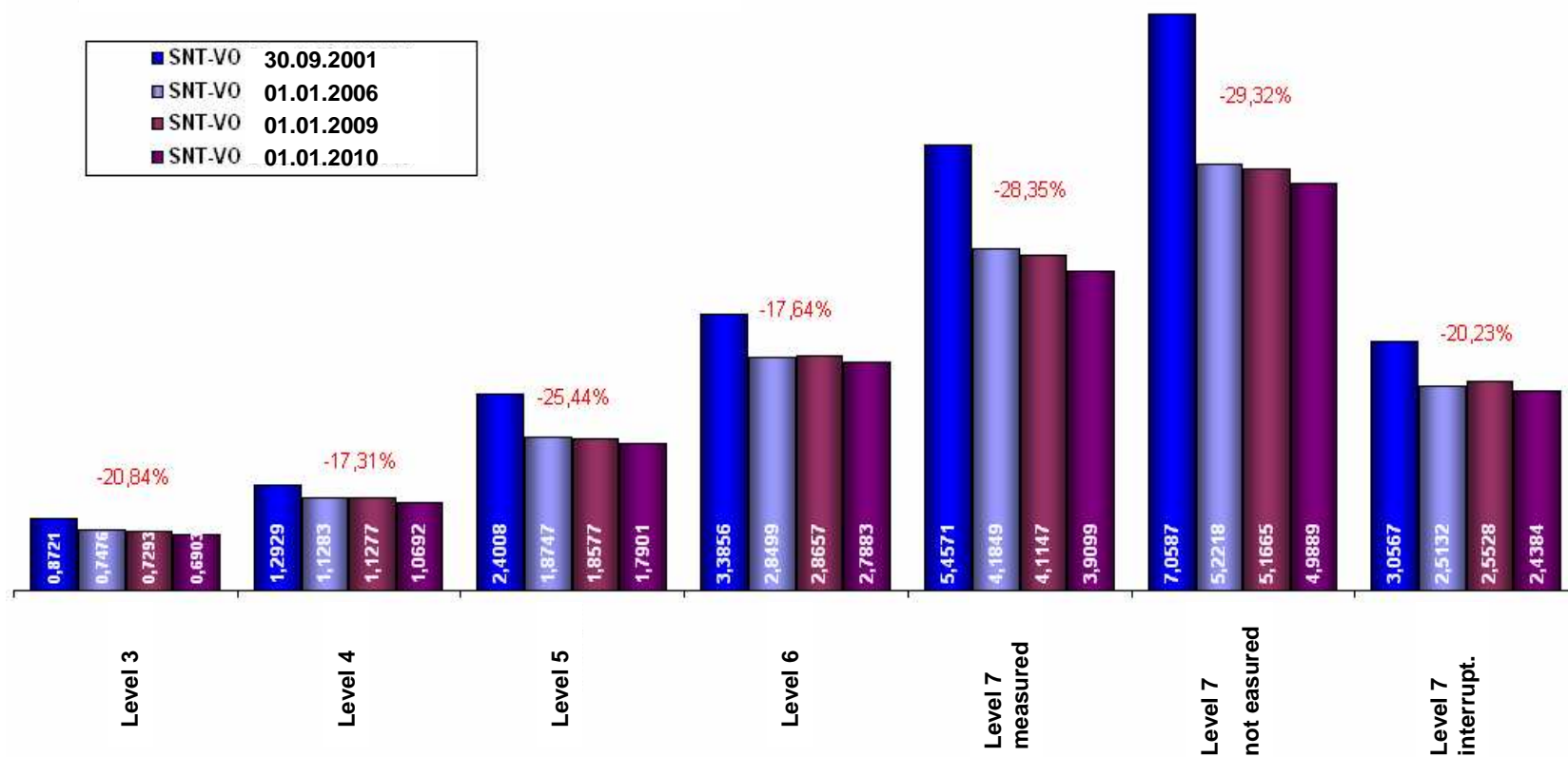


# Outcome of regulation (2001-2010): Strong reduction of system charges (1)



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- Especially strong reduction during cost-plus regulation
- Potential for reduction during incentive-based regulation
- Strongest overall reduction on grid level 7



# Outcome of regulation (2001-2010): Strong reduction of system charges (2)



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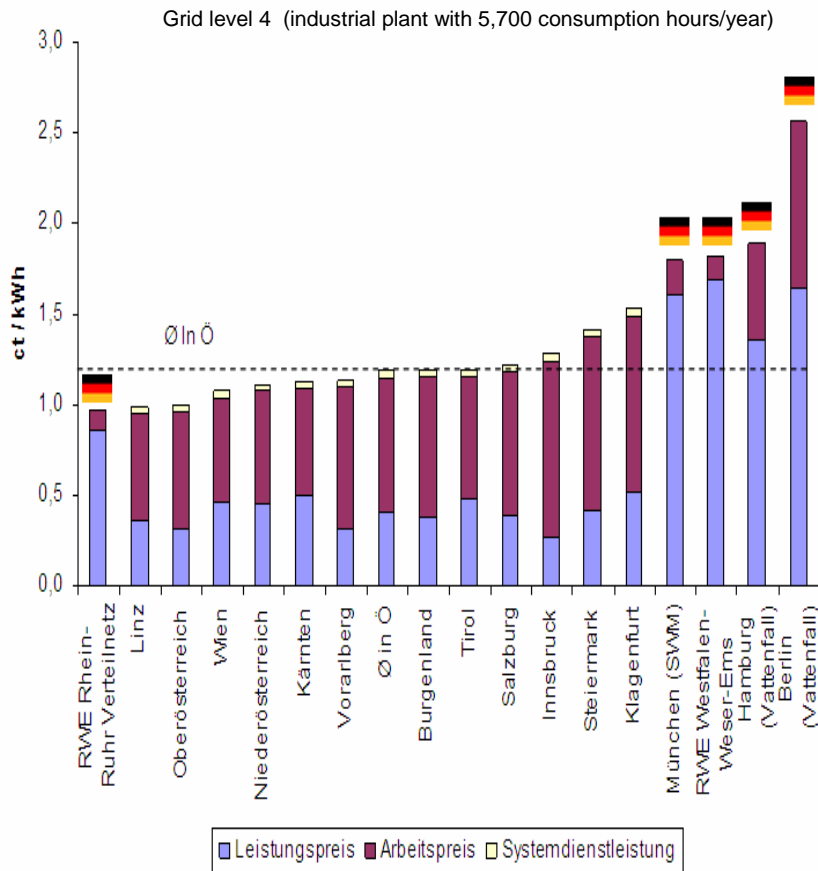
- Tariff adjustments

| Tariff adjustment according to grid levels | 30092001 - 01012003 |              | 01112003 / 01012004 |              | 01112003 / 01012004 - |               | SNT-VO 01012006 |              | SNT-VO 01012007 |             | SNT-VO 01012008 |              | SNT-VO 01012009 |              | SNT-VO 01012010 |              | Total (Volume Basis 2008) |               |
|--|---------------------|--------------|---------------------|--------------|-----------------------|---------------|-----------------|--------------|-----------------|-------------|-----------------|--------------|-----------------|--------------|-----------------|--------------|---------------------------|---------------|
|  | Mio. EUR            | in %         | Mio. EUR            | in %         | Mio. EUR              | in %          | Mio. EUR        | in %         | Mio. EUR        | in %        | Mio. EUR        | in %         | Mio. EUR        | in %         | Mio. EUR        | in %         | Mio. EUR                  | in %          |
| Level 3                                    | -0,53               | -1,6%        | -0,79               | -2,2%        | -3,86                 | -9,9%         | -0,99           | -2,8%        | -0,33           | -1,0%       | -0,26           | -0,7%        | -0,47           | -1,2%        | -1,72           | -4,0%        | -10,52                    | -22,8%        |
| Level 4                                    | -0,58               | -1,1%        | -1,25               | -2,4%        | -5,43                 | -10,0%        | -1,17           | -2,4%        | 0,27            | 0,6%        | -0,02           | 0,0%         | 0,07            | 0,2%         | -1,44           | -3,1%        | -8,61                     | -17,0%        |
| Level 5                                    | -12,59              | -5,6%        | -8,25               | -3,8%        | -24,08                | -11,3%        | -5,60           | -3,0%        | 0,09            | 0,0%        | -0,85           | -0,4%        | -1,22           | -0,6%        | -8,80           | -3,8%        | -76,79                    | -29,4%        |
| Level 6                                    | -0,91               | -0,5%        | -8,67               | -4,5%        | -17,87                | -9,6%         | -4,57           | -2,7%        | 0,22            | 0,1%        | 0,01            | 0,0%         | 0,64            | 0,4%         | -5,20           | -3,0%        | -36,58                    | -18,4%        |
| Level 7 - measured                         | -9,17               | -4,7%        | -12,20              | -3,7%        | -26,44                | -12,0%        | -8,54           | -4,4%        | -0,27           | -0,2%       | -1,72           | -0,9%        | -1,16           | -0,6%        | -10,62          | -5,1%        | -78,94                    | -30,6%        |
| Level 7 - not measured                     | -124,82             | -10,0%       | -44,69              | -4,7%        | -110,45               | -10,7%        | -26,57          | -2,9%        | -0,24           | 0,0%        | -5,38           | -0,6%        | -3,85           | -0,4%        | -33,33          | -3,6%        | -372,90                   | -29,9%        |
| Level 7 - interruptable                    | 0,71                | 1,5%         | -3,36               | -5,2%        | -7,65                 | -11,1%        | -1,67           | -2,7%        | 1,87            | 3,2%        | -0,25           | -0,4%        | -0,62           | -1,0%        | -2,10           | -3,9%        | -11,64                    | -16,3%        |
|  | <b>-147,9</b>       | <b>-7,5%</b> | <b>-79,2</b>        | <b>-4,3%</b> | <b>-195,8</b>         | <b>-10,8%</b> | <b>-49,1</b>    | <b>-3,0%</b> | <b>1,6</b>      | <b>0,1%</b> | <b>-8,5</b>     | <b>-0,5%</b> | <b>-6,6</b>     | <b>-0,4%</b> | <b>-63,2</b>    | <b>-3,8%</b> | <b>-596,0</b>             | <b>-28,0%</b> |

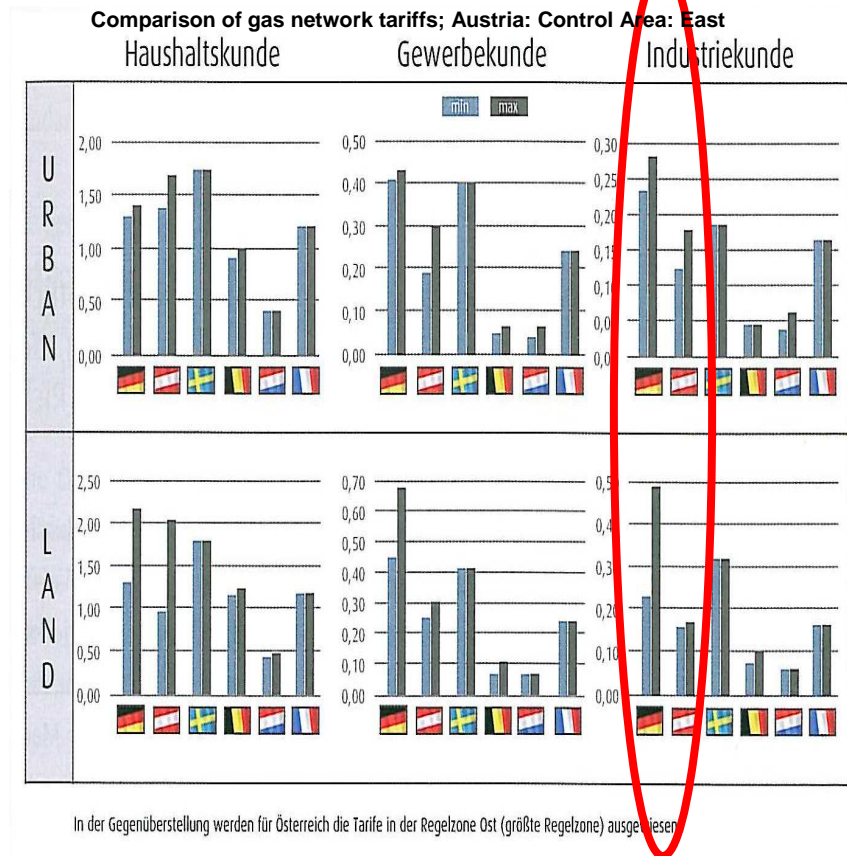
  

| Tariff adjustment according to network areas | SNT-VO 30092001 - 01012003 |              | SNT-VO 01112003 / 01012004 |              | 01022005 - 01042005 / 01062005 |               | SNT-VO 01012006 |              | SNT-VO 01012007 |             | SNT-VO 01012008 |              | SNT-VO 01012009 |              | SNT-VO 01012010 |              | Total (Volume basis 2008) |               |
|--|----------------------------|--------------|----------------------------|--------------|--------------------------------|---------------|-----------------|--------------|-----------------|-------------|-----------------|--------------|-----------------|--------------|-----------------|--------------|---------------------------|---------------|
|  | Mio. EUR                   | in %         | Mio. EUR                   | in %         | Mio. EUR                       | in %          | Mio. EUR        | in %         | Mio. EUR        | in %        | Mio. EUR        | in %         | Mio. EUR        | in %         | Mio. EUR        | in %         | Mio. EUR                  | in %          |
| Burgenland                                   | -14,6                      | -15,6%       | -3,9                       | -5,5%        | -12,5                          | -18,9%        | -2,4            | -4,4%        | -0,8            | -1,6%       | -0,5            | -0,9%        | -1,4            | -2,6%        | -2,4            | -4,5%        | -37,7                     | -43,9%        |
| Carinthia                                    | 0,0                        | 0,0%         | 0,1                        | 0,1%         | -15,6                          | -12,8%        | -1,4            | -1,3%        | 1,4             | 1,2%        | 0,3             | 0,2%         | 1,5             | 1,4%         | 3,5             | 3,1%         | -11,1                     | -8,7%         |
| Klagenfurt                                   | 0,5                        | 2,5%         | -1,4                       | -6,4%        | -2,5                           | -11,5%        | -0,4            | -2,1%        | 0,9             | 4,7%        | -0,5            | -2,7%        | 0,7             | 3,8%         | -0,7            | -3,2%        | -3,5                      | -15,2%        |
| Lower Austria                                | -10,8                      | -4,1%        | -14,2                      | -5,6%        | -20,1                          | -8,1%         | -5,6            | -2,5%        | 1,9             | 0,8%        | -1,9            | -0,8%        | 2,7             | 1,2%         | -6,0            | -2,5%        | -58,7                     | -20,9%        |
| Upper Austria                                | -12,4                      | -5,3%        | -9,3                       | -4,3%        | -23,6                          | -10,7%        | -3,9            | -2,0%        | -5,0            | -2,5%       | -2,2            | -1,1%        | -2,1            | -1,1%        | -12,0           | -5,6%        | -83,7                     | -32,6%        |
| Linz   | -4,2                       | -5,1%        | -2,7                       | -3,1%        | -11,0                          | -12,6%        | -2,4            | -3,2%        | -0,6            | -0,8%       | -2,3            | -3,3%        | -2,9            | -4,0%        | -0,2            | -0,3%        | -27,6                     | -29,0%        |
| Salzburg                                     | -28,9                      | -16,1%       | -8,4                       | -6,0%        | -15,1                          | -10,9%        | -5,9            | -4,8%        | -3,4            | -2,9%       | -1,2            | -1,0%        | -2,2            | -1,9%        | -6,4            | -5,5%        | -69,1                     | -39,0%        |
| Styria                                       | -39,0                      | -15,1%       | -9,9                       | -3,4%        | -40,4                          | -14,2%        | -10,0           | -4,1%        | 1,6             | 0,7%        | -1,7            | -0,7%        | -11,8           | -4,9%        | -9,6            | -4,0%        | -137,5                    | -38,8%        |
| Graz   | -6,0                       | -12,9%       | -3,4                       | -8,0%        | -4,8                           | -12,2%        | -1,6            | -4,6%        | -0,6            | -1,9%       | -0,7            | -2,2%        | -0,2            | -0,5%        | 0,7             | 2,3%         | -7,0                      | -34,0%        |
| Tyrol  | -3,6                       | -2,4%        | -8,1                       | -5,4%        | -11,7                          | -7,8%         | -8,5            | -6,2%        | 3,3             | 2,3%        | 0,0             | 0,0%         | 2,4             | 1,7%         | -5,4            | -3,7%        | -34,6                     | -19,9%        |
| Innsbruck                                    | -0,2                       | -0,6%        | -1,3                       | -4,3%        | -2,1                           | -7,3%         | -1,0            | -3,9%        | 2,1             | 7,3%        | 0,0             | 0,0%         | 0,1             | 0,3%         | -1,2            | -4,0%        | -3,1                      | -10,1%        |
| Vorarlberg                                   | -1,8                       | -2,2%        | -0,6                       | -0,8%        | -6,9                           | -9,0%         | -1,0            | -1,5%        | 2,1             | 2,8%        | -0,1            | -0,1%        | 1,1             | 1,5%         | -4,2            | -5,3%        | -12,1                     | -14,1%        |
| Vienna                                       | -26,9                      | -7,7%        | -16,1                      | -4,7%        | -29,2                          | -8,9%         | -5,0            | -1,7%        | -1,2            | -0,4%       | 2,4             | 0,8%         | 5,4             | 1,7%         | -19,3           | -5,9%        | -100,2                    | -25,8%        |
| Kleinwalsertal                               | 0,0                        | 0,0%         | 0,0                        | -1,5%        | -0,1                           | -4,9%         | 0,0             | 1,1%         | 0,0             | -0,7%       | 0,0             | -2,4%        | 0,0             | -0,2%        | 0,0             | 1,7%         | -0,1                      | -6,8%         |
|  | <b>-147,9</b>              | <b>-7,5%</b> | <b>-79,2</b>               | <b>-4,3%</b> | <b>-195,8</b>                  | <b>-10,8%</b> | <b>-49,1</b>    | <b>-3,0%</b> | <b>1,6</b>      | <b>0,1%</b> | <b>-8,5</b>     | <b>-0,5%</b> | <b>-6,6</b>     | <b>-0,4%</b> | <b>-63,2</b>    | <b>-3,8%</b> | <b>-596,0</b>             | <b>-28,0%</b> |

# International comparison: Industry in Germany pays 2/3 more than the Austrian



Source: Plaut, VIK, E-Control



Source: emw 04/09

# Outcome of regulation: Austrian transmission tariffs are among the lowest in the EU (in 2008)



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- Below the EU-average

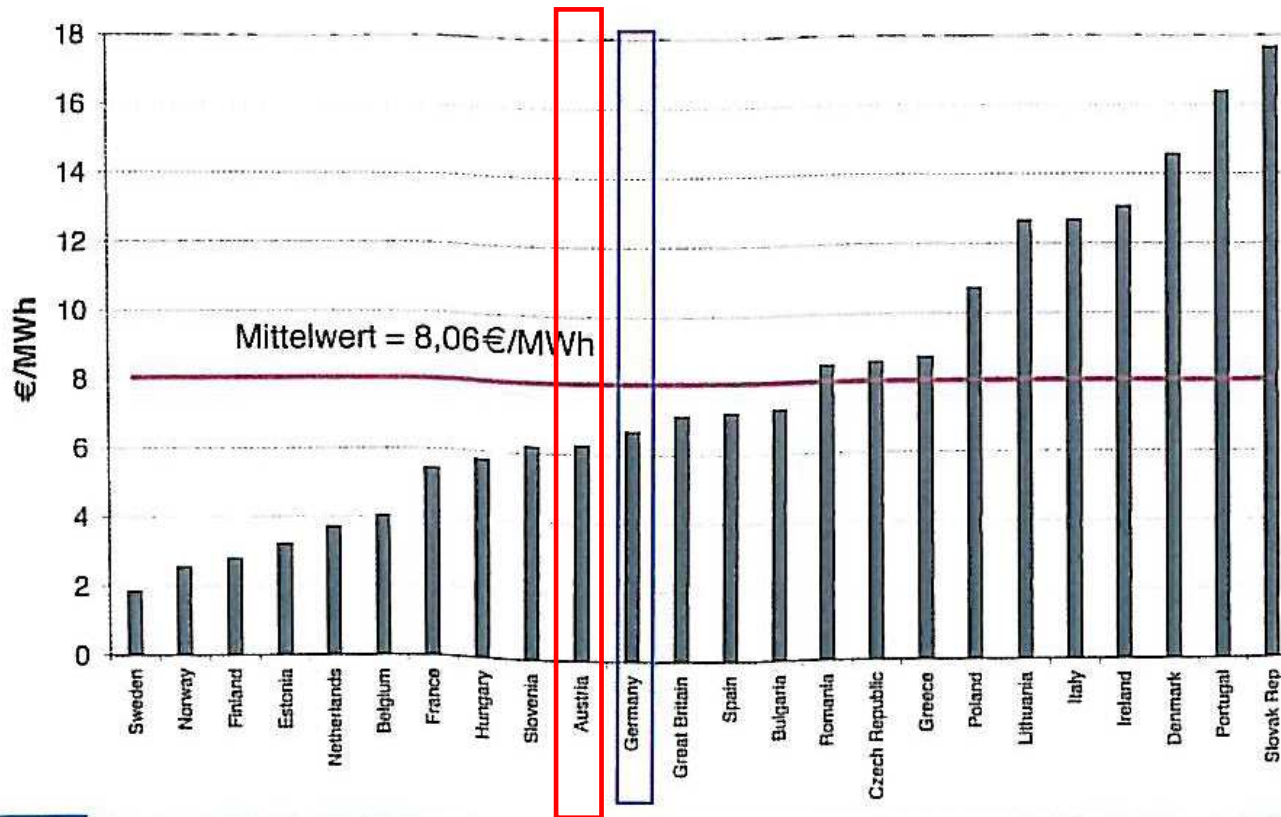


Abb. 2

Ergebnis des Netzentgeltvergleichs europäischer ÜNB in 2008

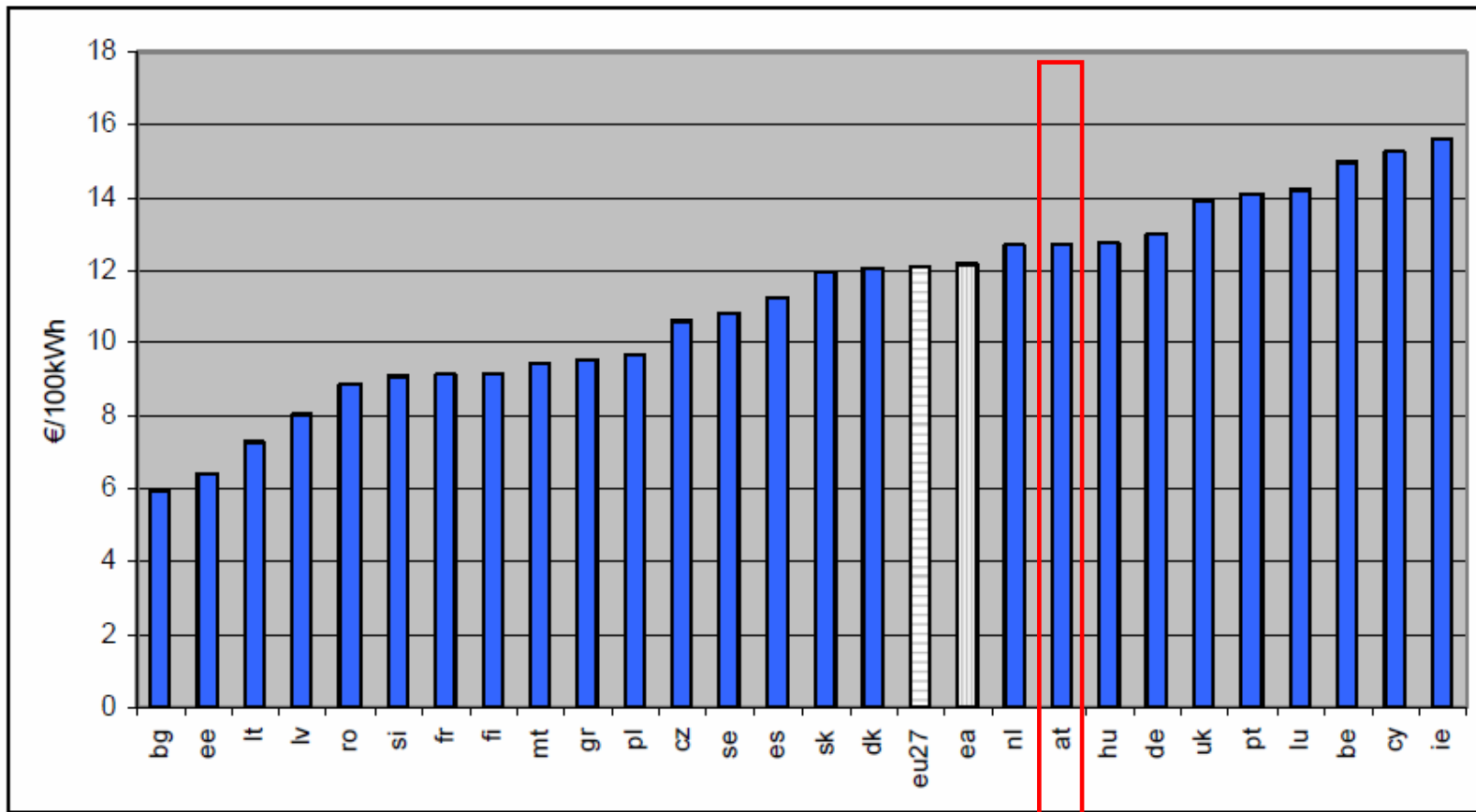
Source: Energiewirtschaftliche Tagesfragen 1/2 2010

# Austrian electricity end-user price (households, excl. taxes) is among the highest in the EU (in 2008)



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- Above the EU-average

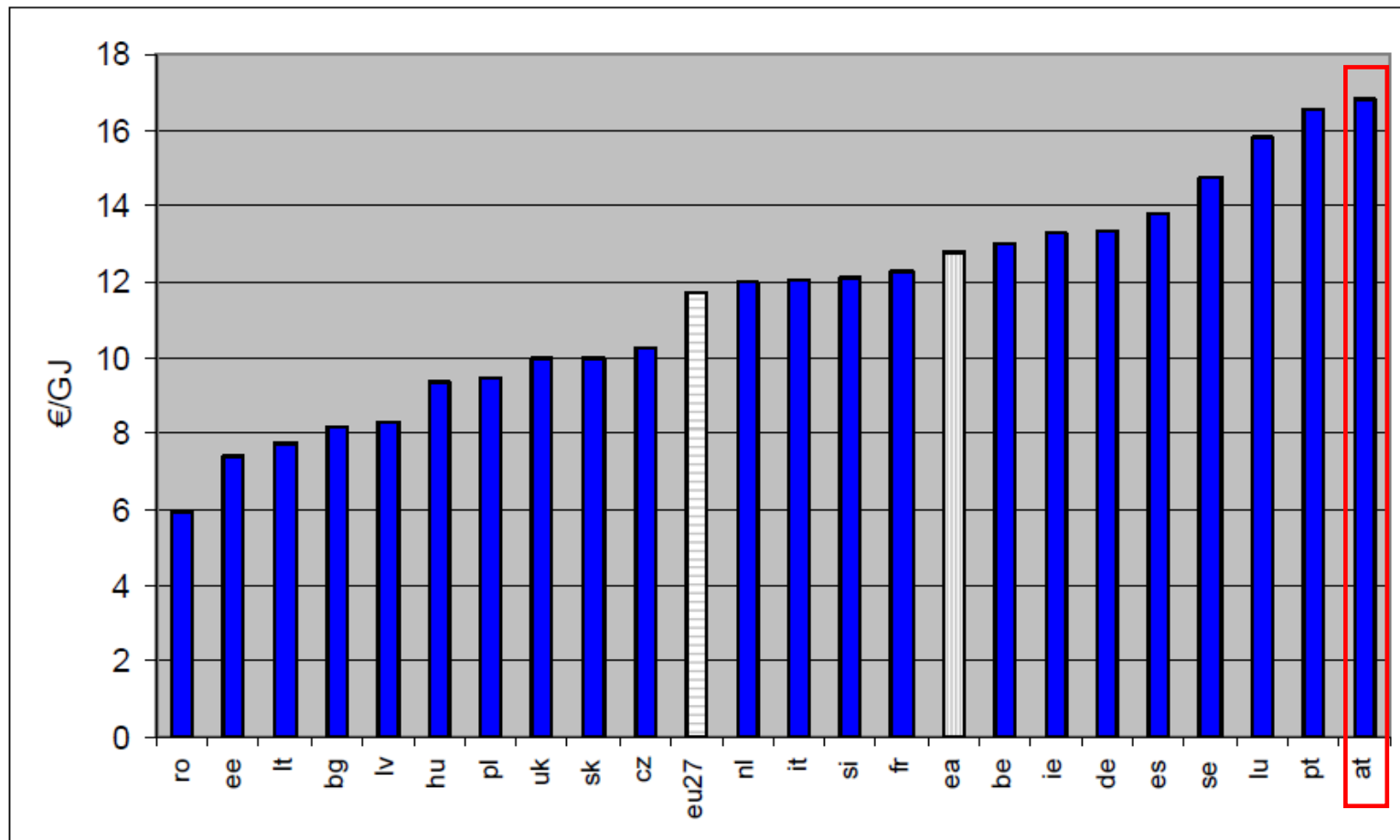


Quelle: Eurostat

# Austrian gas end-user price (households, excl. taxes) is the highest in the EU (in 2008)



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Source: Eurostat

# Outcome of regulation (2001-2010): International view of Austrian regulation

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- **Electricity Journal 2008: E-Control** one of **5 “Best-Practice-Regulators”** due to an international survey (75 managers from 17 different countries); described as very competent
- **University of Cambridge:** survey sees **E-Control** under **top 3** of **“Best-Practice-Regulators”** worldwide concerning effective regulation of gas and electricity transmission and distribution
- **“Stadtwerke studie 2009” – Ernst & Young:** Austrian utilities do see **E-Control** as a **driving force for change and development** (38% of directors share this view)
- **Research Institute AKF:** ranks E-Control as **number 7 (on average)** with regard to independency among 15 European regulators
- Ongoing discussion and the **expert opinion** of E-Control regarding **“Best-Practices”** is **mentioned by other regulators** (GER, IT, HU, CZ and SK (cf. Europe Economics Interim Report, 2006)