CONCORDE CAPITAL

# Generation Companies

## Employed assets + economic profit

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### Centrenergo

| | |
|---|---|
| Bloomberg | CEEN UZ |
| Xetra | DBG |
| DR Ratio | 1 : 10 |
| Shares, mln | 369.4 |
| **Ownership** | |
| State (NC ECU) | 78.3% |
| Other | 21.7% |
| Free float, % | 21.7% |
| Free float, USD mln | 64.7 |

### Dniproenergo

| | |
|---|---|
| Bloomberg | DNEN UZ |
| Xetra | DPG |
| DR Ratio | 4 : 1 |
| Shares, mln | 5.97 |
| **Ownership** | |
| State (NC ECU) | 50.0% |
| DTEK | 46.0% |
| Other | 4.0% |
| Free float, % | 4.0% |
| Free float, USD mln | 16.3 |

### Donbasenergo

| | |
|---|---|
| Bloomberg | DOEN UZ |
| Xetra | - |
| Shares, mln | 23.6 |
| **Ownership** | |
| State (NC ECU) | 85.8% |
| Other | 14.2% |
| Free float, % | 14.2% |
| Free float, USD mln | 13.6 |

### Zakhidenergo

| | |
|---|---|
| Bloomberg | ZAEN UZ |
| Xetra | WT7 |
| DR Ratio | 4 : 1 |
| Shares, mln | 12.8 |
| **Ownership** | |
| State (NC ECU) | 70.1% |
| Other | 29.9% |
| Free float, % | 29.9% |
| Free float, USD mln | 196.9 |

- **We revise our valuation approach for GenCos, setting aside DCF modeling (which is sensitive to mid-term assumptions that are highly uncertain in the current market) and valuation by Russian peers. We apply economic profit model instead**
- **More than 90% of GenCos' intrinsic value is represented by invested capital, calculated based on only the current physical condition of existing generating assets and further discounted to assume any risks related to their use. Even this conservative approach yields more than 180% upsides for three stocks**
- **The recent drop in demand for power from domestic industry forced us to cut production forecasts for 4Q08-2009; still, we expect GenCos' production to decrease less than nation-wide demand for power, as the brunt of the decline will be borne by Ukraine's nuclear power plants**
- **Our long-term demand forecasts and view on the role of thermal generation in the future domestic power balance remains intact – we stick to our optimistic outlook on GenCos' value creation potential**
- **We are sticking to our view on DOEN as our top sector pick: the expected commissioning of its CFB coal power unit, the first in the CIS, is the main catalyst**

### Financial forecasts

| | Net revenue, USD mln | | | | EBITDA, USD mln | | | |
|---|---|---|---|---|---|---|---|---|
| | 2008E | yoy | 2009E | yoy | 2008E | margin | 2009E | margin |
| CEEN | 950 | 40% | 1,072 | 13% | 44.3 | 4.7% | 48.4 | 4.5% |
| DNEN | 1,022 | 35% | 1,187 | 16% | 66.9 | 6.5% | 75.4 | 6.3% |
| DOEN | 433 | 49% | 516 | 19% | 35.4 | 8.2% | 31.2 | 6.0% |
| ZAEN | 968 | 35% | 1,169 | 21% | 29.8 | 3.1% | 37.2 | 3.2% |

### Valuation summary

| | Price | MCap | EV/S | | EV/EBITDA | | EV/Capacity, USD/kW | | Implied price | Implied EV / Coal capacity | Implied upside | Upside effective* | Rec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | USD | USD mln | 2008E | 2009E | 2008E | 2009E | coal units | total capacity | USD | USD/kW | | | |
| CEEN | 0.81 | 298.3 | 0.4 | 0.4 | 9.2 | 8.4 | 89 | 54 | 3.2 | 282 | 295% | 274% | BUY |
| DNEN | 68.5 | 408.7 | 0.5 | 0.4 | 7.0 | 6.2 | 81 | 57 | 265.5 | 284 | 288% | 187% | BUY |
| DOEN | 4.0 | 95.5 | 0.5 | 0.5 | 6.5 | 7.4 | 87 | 87 | 19.3 | 224 | 379% | 332% | BUY |
| ZAEN | 51.5 | 658.5 | 0.8 | 0.7 | 26.8 | 21.5 | 173 | 173 | 88.0 | 275 | 71% | 65% | BUY |
| **Average** | | | **0.6** | **0.5** | **12.4** | **10.9** | **108** | **93** | | | | | |
| EM peers | | | 2.9 | 2.5 | 12.8 | 8.5 | | 726 | | | | | |
| DM peers | | | 1.9 | 1.8 | 5.8 | 5.5 | | 732 | | | | | |

** Refer to our strategy note of Nov. 24, 2008 for the definition and calculation of upside effective (UE)*
*Source: Company data, Bloomberg, Concorde Capital research*

## Performance: better than Russian peers

Ukrainian GenCos stock prices have fallen more than those of their global peers, but, not surprisingly, much less than Russian OGKs (refer to our May 2008 GenCos update).

**Market price performance YTD**

| DM Integrated | | DM Generation | | EM Generation | | RU Generation | | UA Generation | |
|---|---|---|---|---|---|---|---|---|---|
| CEZ | -56% | Boralex | -64% | China Power | -61% | OGK-1 | -94% | CEEN | -81% |
| E.ON | -51% | Drax Group | -25% | Datang Power | -54% | OGK-2 | -93% | DNEN | -79% |
| EDF | -50% | J-Power | -4% | EGCO | -57% | OGK-3 | -92% | DOEN | -85% |
| Enel | -45% | Int'l Power | -58% | Huadian Power | -62% | OGK-4 | -92% | ZAEN | -46% |
| Iberdrola | -52% | NRG Energy | -48% | NTPC | -46% | OGK-5 | -77% | | |
| RWE | -44% | | | Tractebel | -31% | OGK-6 | -92% | | |
| Median | **-50%** | | **-48%** | | **-56%** | | **-92%** | | **-80%** |
| Mean | **-50%** | | **-40%** | | **-52%** | | **-90%** | | **-73%** |

*Source: Bloomberg, Concorde Capital calculations*

Driven down by the market overhang after their free float increased since July 1 (as a result of the RAO UES restructuring), five OGKs shed over 90% YTD and now trade below Ukrainian GenCos on EV/Capacity. The performance of OGK-5, the only company whose free float was unchanged since July 1, is close to Ukrainian peers.

While it appears as if the Russian generation sector's long-term growth potential is greater, investing in Ukrainian stocks look safer in the short-term as the oversupply of OGK shares is likely to continue depressing their prices.

**EV/Capacity**, USD/kW

| DM Generation | | EM Generation | | RU Generation | | UA Generation* | |
|---|---|---|---|---|---|---|---|
| Boralex | 886 | China Power | 306 | OGK-1 | 111 | CEEN | 89 |
| Drax Group | 853 | Datang Power | 1,142 | OGK-2 | 62 | DNEN | 81 |
| J-Power | 897 | EGCO | 275 | OGK-3 | (188)** | DOEN | 87 |
| Int'l Power | 530 | Huadian Power | 543 | OGK-4 | 57 | ZAEN | 173 |
| NRG Energy | 497 | NTPC | 896 | OGK-5 | 234 | | |
| | | Tractebel | 902 | OGK-6 | 77 | | |
| **Median** | **853** | | **719** | | **77** | | **88** |
| **Mean** | **732** | | **677** | | **108** | | **108** |

** Based on coal-fueled capacity; ** Outlier*
*Source: Bloomberg, RTS, PFTS, company data*

Given their market-specifics, we believe OGKs are a poor benchmark for valuing Ukrainian GenCos.

**Market multiples**

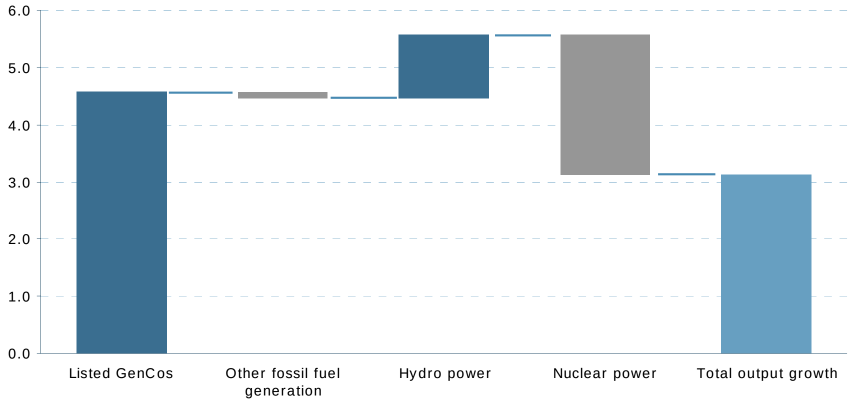
| | EV/S | | EV/EBITDA | | EV/Capacity |
|---|---|---|---|---|---|
| | **2008** | **2009** | **2008** | **2009** | USD/kW |
| Boralex | 1.8 | 2.0 | 5.3 | 5.1 | 886 |
| Drax Group | 1.5 | 1.4 | 5.0 | 4.9 | 853 |
| International Power | 2.2 | 1.9 | 5.9 | 5.1 | 530 |
| NRG Energy | 1.9 | 2.1 | 4.9 | 5.1 | 497 |
| J-Power | 1.9 | 1.7 | 8.0 | 7.2 | 897 |
| **DM peers average** | **1.9** | **1.8** | **5.8** | **5.5** | **732** |
| | | | | | |
| EGCO | 2.8 | 2.0 | 4.0 | 4.1 | 275 |
| China Power | 1.7 | 1.4 | 13.5 | 6.9 | 306 |
| Datang Power | 3.9 | 3.3 | 16.8 | 11.2 | 1142 |
| Huadian Power | 2.0 | 1.6 | 17.0 | 8.3 | 543 |
| Huaneng Power | 2.4 | 2.1 | 20.9 | 11.5 | 747 |
| NTPC | 3.1 | 2.9 | 10.5 | 10.0 | 896 |
| CR-Power | 3.1 | 2.5 | 13.1 | 9.0 | 882 |
| Tractebel | 4.2 | 4.1 | 6.7 | 6.8 | 1019 |
| **EM peers average** | **2.9** | **2.5** | **12.8** | **8.5** | **726** |
| | | | | | |
| CEEN | 0.4 | 0.4 | 9.2 | 8.4 | 89 |
| DNEN | 0.5 | 0.4 | 7.0 | 6.2 | 81 |
| DOEN | 0.5 | 0.4 | 6.5 | 7.4 | 87 |
| ZAEN | 0.8 | 0.7 | 26.8 | 21.5 | 173 |
| **UA average** | **0.6** | **0.5** | **12.4** | **10.9** | **108** |
| | | | | | |
| **Premium/discount to EM peer average** | | | | | |
| CEEN | -85% | -83% | -31% | -3% | -88% |
| DNEN | -84% | -83% | -47% | -28% | -89% |
| DOEN | -82% | -80% | -51% | -15% | -88% |
| ZAEN | -72% | -70% | 101% | 147% | -76% |

*Source: Bloomberg, RTS, PFTS, company data, Concorde Capital estimates*

## GenCos' power production growth exceeded Ukraine's consumption growth

The four listed GenCos raised power production by 4.6 TWh (+12.3%) yoy in 9M08, more than our expectations, on the background of an increase in total domestic power production by only 3.1 TWh (+2.3%) yoy. The rise was the result of unplanned growth in demand for thermal capacities in July-October 2008 due to a technical failure at the Khmelnitsk Nuclear Power Plant.

**Change in Ukraine's power output in 9M08, yoy, TWh**




*Note: Blue indicates a rise in power output; and gray a decline during the period*
*Source: EnergoBiznes, Concorde Capital calculations*

We believe that GenCos' production growth will remain above the sector's in the mid to long-term: as we wrote before (refer to our May 2008 GenCos update), nuclear capacities are almost fully utilized, so fossil fuel producers will cover most of the growth in domestic electricity demand.

Moreover, we expect only a minor impact on TPPs from the short-term decline in power demand from the energy-intensive industrial sector. The brunt, which effectively decreases base-load demand, will instead be borne by nuclear power plants, who will ramp down their stable production regimes.

Nevertheless, we predict power production at GenCos will decrease yoy in 4Q08 and in 2009.

**Power output, TWh**

| | 9M08 | | 2008E | | | | 2009E | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Old | | New | | Old | | New | |
| | TWh | yoy | TWh | yoy | TWh | yoy | TWh | yoy | TWh | yoy |
| CEEN | 12.2 | 21% | 14.4 | -4% | 16.8 | 11% | 14.6 | 1% | 16.2 | -3% |
| DNEN | 12.9 | 16% | 17.9 | 8% | 17.8 | 7% | 19.2 | 7% | 17.7 | -1% |
| DOEN | 5.3 | 11% | 7.4 | 9% | 7.2 | 5% | 8.0 | 8% | 7.2 | 0% |
| ZAEN | 11.2 | 2% | 16.4 | 8% | 15.4 | 2% | 17.0 | 4% | 15.5 | 1% |

*Source: EnergoBiznes, Concorde Capital estimates*

## Financials: profits are decreasing

All Ukrainian generation companies reported lower profitability in 9M08. This was the result of the market regulator's practice of minimizing electricity price growth amid the background of increasing coal and gas prices.

An additional factor that spoiled profitability was the unexpected stoppage at Khmelnitsk NPP, which had two negative outcomes for GenCos' profitability:

- failure reduced the share of cheap nuclear power in the total domestic power balance, raising the wholesale price and forcing the regulator make additional constraints on GenCos' tariff growth
- the increased load on thermal power plants led to escalated demand for coal, putting short-term upward pressure on coal prices

**9M08 financials, USD mln**

| | Net revenue | | EBITDA | | | Net income | | |
|---|---|---|---|---|---|---|---|---|
| | 9M08 | yoy | 9M08 | yoy | margin | 9M08 | yoy | margin |
| CEEN | 691.3 | 59% | 38.1 | -16% | 6% | 18.6 | 76% | 3% |
| DNEN | 712.1 | 44% | 59.6 | 8% | 8% | 13.9 | -1% | 2% |
| DOEN | 310.8 | 53% | 33.5 | -11% | 11% | 12.9 | -40% | 4% |
| ZAEN | 687.5 | 32% | 26.1 | -12% | 4% | -4.0 | neg. | -1% |

*Source: Company data*

We expect a slight decrease in energy coal prices by the end 2008, which will reduce fuel costs for GenCos. Still, this positive effect on their earnings is most likely to be offset by limited growth in GenCos' tariffs, making FY08 profitability even lower than over 9M08. We do not expect changes in the tariff policy with respect to GenCos in 2009: we believe fighting inflation will remain a higher priority for the government and the sector regulator.

**Financial forecast revisions**

**Net revenue, USD mln**

| | | | 2008E | | 2009E | |
|---|---|---|---|---|---|---|
| | 2006 | 2007 | Old | New | Old | New |
| CEEN | 525 | 679 | 847 | 952 | 954 | 1,064 |
| DNEN | 551 | 758 | 1,051 | 1,016 | 1,267 | 1,174 |
| DOEN | 272 | 291 | 430 | 429 | 506 | 505 |
| ZAEN | 617 | 716 | 1,005 | 968 | 1,189 | 1,165 |

**EBITDA, USD mln**

| | | | 2008E | | 2009E | |
|---|---|---|---|---|---|---|
| | 2006 | 2007 | Old | New | Old | New |
| CEEN | 69.8 | 67.0 | 74.0 | 44.3 | 89.6 | 47.9 |
| DNEN | 56.6 | 79.6 | 104.2 | 66.9 | 134.9 | 75.0 |
| DOEN | 28.9 | 32.7 | 38.3 | 35.4 | 44.9 | 30.6 |
| ZAEN | 43.0 | 45.9 | 63.2 | 29.8 | 80.6 | 37.0 |

**EBITDA margin**

| | | | 2008E | | 2009E | |
|---|---|---|---|---|---|---|
| | 2006 | 2007 | Old | New | Old | New |
| CEEN | 13% | 10% | 9% | 5% | 9% | 5% |
| DNEN | 10% | 11% | 10% | 7% | 11% | 6% |
| DOEN | 11% | 11% | 9% | 8% | 9% | 6% |
| ZAEN | 7% | 6% | 6% | 3% | 7% | 3% |

*Source: Company data, Concorde Capital estimates*

## Valuation revision

We do not foresee any improvements in GenCos' profitability in the short-term. However, improvements in the mid to long-term are inevitable, given the growing role of thermal generation in Ukraine's energy balance (with the clock ticking until NPPs' decommissioning dates, beginning in 2011) and the waning peak capacity reserve in the energy system. We also believe that wholesale energy market reform, scheduled for 2009-2014 (though highly likely to be postponed for at least two years), set to liberalize the generation market, will allow GenCos to generate value for shareholders in the long-term.

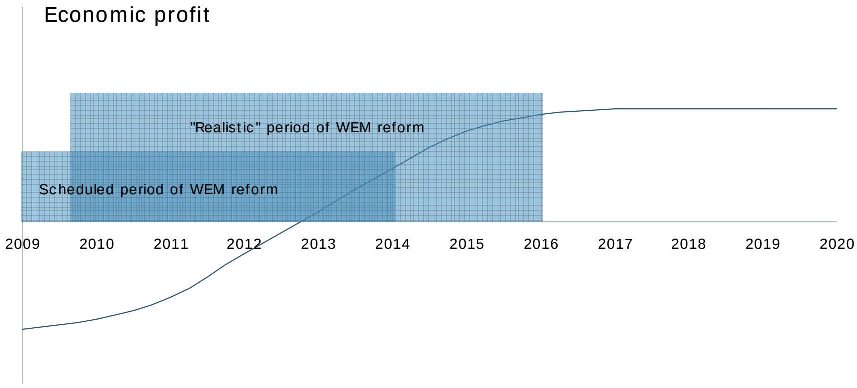
Due to mid-term uncertainties related to the tariff policy and GenCos' profitability, we set aside DCF modeling (which is very sensitive to mid-term financial forecasts) in estimating GenCos' fair value. We believe an economic profit (EP) model is a more appropriate valuation instrument in this case:

*Fair value = Invested capital + NPV of future economic profits*

We concentrate on two periods for valuating GenCos by EP model:
- At present (via accounting for invested capital)
- Long-term prospects, after the wholesale market reform is finished and GenCos fully benefit from market liberalization (via terminal value)

For the uncertain mid-term, we simply assume that the present value of negative economic profits in the nearest few years will be fully offset by the present value of positive economic profits in forthcoming years. In other words, for valuation purposes, we take the sum of discounted economic profits for 2009-2020 as zero.

**Assumption: sum of PV of economic profits for 2009-2020 is zero**




*Source: Concorde Capital*

Our valuation is based on the following equation:

*Fair value =*
*= Invested capital in 2009*
*+ sum of PV of economic profits 2009-2020, taken as zero*
*+ PV of terminal economic profit*

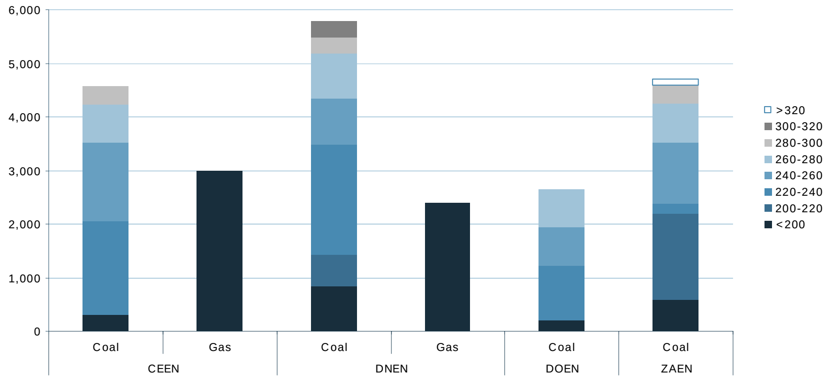
## Estimation of initial invested capital

We estimate GenCos' invested capital as the replacement value of their generation assets netted by accumulated depreciation as of the beginning of 2009. We use a units-of-time deprecation method to mitigate accounting distortions in the value of accumulated deprecation on the balance sheet.

### Basic assumptions:

- **Replacement cost** in 2008 is **USD 1,500/kW**
- Accumulated depreciation, calculated by a **units-of-time deprecation method**, is based on an assumption of **280,000 hrs as the full service life** of a generation unit. The number was chosen for the purpose of conservatism: blocks that have worked more than 280,000 hrs account for 7.5% of four GenCos' electricity output for 9M08.

**Breakdown of GenCos' equipment by hours worked*, MW**




** As of Jan. 1, 2008*
*Source: NC ECU, company data, Concorde Capital calculations*

### Adjustments to invested capital:

- **We take only coal-fired power units to calculate initial invested capital.** We use this conservative assumption (it reduces initial invested capital for CEEN by 2.9x, and for DNEN by 2.2x), as we do not believe gas-fired power units have a chance of being put into operation in the mid-term
- Conservatively, we apply a **25% discount** to the value of **DOEN's Slavyansk TPP**: the plant operates only one power unit, and thus is subject to frequent technical failures
- Conservatively, we apply a **25% discount** to the value of **DOEN's Starobeshev TPP unit #4**: this newly reconstructed unit with CFB technology has not been commissioned yet. The absence of experience in running this type of equipment in Ukraine may imply risks

**Summary: invested capital estimation**

| | Installed capacity GW | | Depreciated capacity GW | | Invested capital USD mln | |
|---|---|---|---|---|---|---|
| | total | coal-fired | total | coal-fired | total | adjusted |
| CEEN | 7.58 | 4.58 | 2.24 | 0.78 | 3,364 | 1,175 |
| DNEN | 8.19 | 5.79 | 2.25 | 1.02 | 3,378 | 1,530 |
| DOEN | 2.65 | 2.65 | 0.45 | 0.45 | 669 | 569 |
| ZAEN | 4.6 | 4.6 | 0.82 | 0.82 | 1,223 | 1,223 |

*Source: NC ECU, company data, Concorde Capital estimates*

A list of assumptions for terminal value is provided in the appendix.

**Valuation results**, USD mln

| | Initial invested capital | Discounted terminal EP | Implied EV | Implied EV per Installed capacity, USD/KW ...coal units | Implied EV per Installed capacity, USD/KW ...total | Implied MCap | Implied share price, USD | Upside | Upside effective* | Rec. |
|---|---|---|---|---|---|---|---|---|---|---|
| CEEN | 1,175 | 113 | 1,288 | 282 | 170 | 1,177 | 3.2 | 295% | 274% | BUY |
| DNEN | 1,530 | 114 | 1,643 | 284 | 201 | 1,584 | 265.5 | 288% | 187% | BUY |
| DOEN | 569 | 22 | 592 | 224 | 224 | 457 | 19.3 | 379% | 332% | BUY |
| ZAEN | 1,223 | 41 | 1,264 | 275 | 275 | 1,125 | 88.0 | 71% | 65% | BUY |

** Upside effective (UE) is calculated as: UE = Upside – Spread – Upside·Spread (refer to our strategy note of Nov. 24, 2008); spread is taken as a 3-month average*
*Source: NC ECU, company data, PFTS, Concorde Capital research*

**Sensitivity analysis: share price**, USD

**CEEN** — Economic spread (ROIC - WACC) in perpetuity vs. Service life of power unit, ths hrs

| Economic spread | 240 | 260 | **280** | 300 | 320 |
|---|---|---|---|---|---|
| -1% | 0.9 | 1.7 | 2.6 | 3.5 | 4.3 |
| 0% | 1.1 | 1.9 | 2.9 | 3.8 | 4.7 |
| **1%** | 1.4 | 2.2 | **3.2** | 4.2 | 5.1 |
| 2% | 1.6 | 2.5 | 3.5 | 4.5 | 5.5 |
| 3% | 1.8 | 2.7 | 3.8 | 4.9 | 5.9 |
| 4% | 2.0 | 3.0 | 4.1 | 5.2 | 6.3 |
| 5% | 2.2 | 3.2 | 4.4 | 5.6 | 6.7 |

**CEEN** — Current replacement value, USD/kW vs. Inflation in equipment prices

| Current replacement value | 3.0% | 4.0% | **5.0%** | 6.0% | 7.0% |
|---|---|---|---|---|---|
| 1,200 | 2.4 | 2.5 | 2.5 | 2.5 | 2.6 |
| 1,300 | 2.7 | 2.7 | 2.7 | 2.8 | 2.8 |
| 1,400 | 2.9 | 2.9 | 3.0 | 3.0 | 3.0 |
| **1,500** | 3.1 | 3.2 | **3.2** | 3.2 | 3.3 |
| 1,600 | 3.4 | 3.4 | 3.4 | 3.5 | 3.5 |
| 1,700 | 3.6 | 3.6 | 3.7 | 3.7 | 3.7 |
| 1,800 | 3.8 | 3.8 | 3.9 | 3.9 | 4.0 |

**DNEN** — Economic spread (ROIC - WACC) in perpetuity vs. Service life of power unit, ths hrs

| Economic spread | 240 | 260 | **280** | 300 | 320 |
|---|---|---|---|---|---|
| -1% | 96 | 159 | 227 | 296 | 363 |
| 0% | 109 | 175 | 247 | 318 | 388 |
| **1%** | 121 | 191 | **266** | 340 | 413 |
| 2% | 134 | 207 | 285 | 362 | 438 |
| 3% | 147 | 222 | 304 | 384 | 463 |
| 4% | 160 | 238 | 323 | 406 | 488 |
| 5% | 172 | 254 | 342 | 428 | 513 |

**DNEN** — Current replacement value, USD/kW vs. Inflation in equipment prices

| Current replacement value | 3.0% | 4.0% | **5.0%** | 6.0% | 7.0% |
|---|---|---|---|---|---|
| 1,200 | 207 | 209 | 210 | 212 | 214 |
| 1,300 | 225 | 227 | 229 | 231 | 233 |
| 1,400 | 244 | 245 | 247 | 249 | 252 |
| **1,500** | 262 | 263 | **266** | 268 | 270 |
| 1,600 | 280 | 282 | 284 | 286 | 289 |
| 1,700 | 298 | 300 | 302 | 305 | 308 |
| 1,800 | 316 | 318 | 321 | 323 | 326 |

**DOEN** — Economic spread (ROIC - WACC) in perpetuity vs. Service life of power unit, ths hrs

| Economic spread | 240 | 260 | **280** | 300 | 320 |
|---|---|---|---|---|---|
| -1% | 4.3 | 9.4 | 17.4 | 25.5 | 32.5 |
| 0% | 4.7 | 10.0 | 18.4 | 26.8 | 34.1 |
| **1%** | 5.2 | 10.7 | **19.3** | 28.0 | 35.6 |
| 2% | 5.6 | 11.3 | 20.3 | 29.3 | 37.1 |
| 3% | 6.0 | 11.9 | 21.2 | 30.5 | 38.7 |
| 4% | 6.5 | 12.6 | 22.2 | 31.8 | 40.2 |
| 5% | 6.9 | 13.2 | 23.1 | 33.1 | 41.7 |

**DOEN** — Current replacement value, USD/kW vs. Inflation in equipment prices

| Current replacement value | 3.0% | 4.0% | **5.0%** | 6.0% | 7.0% |
|---|---|---|---|---|---|
| 1,200 | 14.2 | 14.3 | 14.3 | 14.4 | 14.5 |
| 1,300 | 15.8 | 15.9 | 16.0 | 16.1 | 16.2 |
| 1,400 | 17.5 | 17.6 | 17.7 | 17.8 | 17.9 |
| **1,500** | 19.1 | 19.2 | **19.3** | 19.5 | 19.6 |
| 1,600 | 20.8 | 20.9 | 21.0 | 21.1 | 21.3 |
| 1,700 | 22.5 | 22.6 | 22.7 | 22.8 | 23.0 |
| 1,800 | 24.1 | 24.2 | 24.3 | 24.5 | 24.6 |

**ZAEN** — Economic spread (ROIC - WACC) in perpetuity vs. Service life of power unit, ths hrs

| Economic spread | 240 | 260 | **280** | 300 | 320 |
|---|---|---|---|---|---|
| -1% | 28.4 | 52.3 | 81.6 | 109.0 | 134.1 |
| 0% | 29.8 | 54.5 | 84.8 | 113.1 | 139.1 |
| **1%** | 31.1 | 56.7 | **88.0** | 117.3 | 144.2 |
| 2% | 32.5 | 58.9 | 91.2 | 121.5 | 149.2 |
| 3% | 33.9 | 61.1 | 94.4 | 125.7 | 154.2 |
| 4% | 35.2 | 63.3 | 97.6 | 129.8 | 159.3 |
| 5% | 36.6 | 65.5 | 100.9 | 134.0 | 164.3 |

**ZAEN** — Current replacement value, USD/kW vs. Inflation in equipment prices

| Current replacement value | 3.0% | 4.0% | **5.0%** | 6.0% | 7.0% |
|---|---|---|---|---|---|
| 1,200 | 67.7 | 67.9 | 68.2 | 68.5 | 68.9 |
| 1,300 | 74.2 | 74.5 | 74.8 | 75.1 | 75.5 |
| 1,400 | 80.8 | 81.1 | 81.4 | 81.8 | 82.2 |
| **1,500** | 87.3 | 87.6 | **88.0** | 88.4 | 88.8 |
| 1,600 | 93.9 | 94.2 | 94.6 | 95.0 | 95.5 |
| 1,700 | 100.4 | 100.8 | 101.2 | 101.6 | 102.1 |
| 1,800 | 107.0 | 107.3 | 107.8 | 108.2 | 108.7 |

*Note: Bold numbers indicate assumptions used for valuation; gray marks the result of the most realistic set of assumptions*
*Source: NC ECU, company data, Concorde Capital research*

# Appendix

## Assumptions for EP model's terminal value

*Terminal value = EP / (WACC – G), or:*
*IC * (ROIC-WACC) / (WACC – G)*

Where:
*EP* **–** economic profit in 2021
*IC* – invested capital as of the beginning of 2021
*G* – sustainable growth rate of EBIT
*WACC* – weighted average cost of capital in perpetuity
*ROIC* – return on invested capital in perpetuity

### Assumptions for invested capital in 2021:

- **All GenCos will have the same level of depreciated capacities as in 2008**. This implicitly assumes that all the companies will modernize/build their capacities in proportion to the wearing out or decommissioning of their existing assets during 2009-2020. We see this assumption as conservative, taking into account that power demand in Ukraine is growing, and there is a need to increase installed capacity
- **Gas fired power units** as well as **DOEN's risky power units** are **fully accounted for** in calculating **IC** in 2021, in contrast to IC in 2009 (refer to our adjustments listed on page 6). In other words, we assume gas-fired capacities and Slaviansk TPP will either be modernized or replaced over 2009-2020; and we assume there is no risk for using CFB technology in the long-term
- **Generation equipment prices will inflate by 5%** p.a. during 2009-2020

### Other assumptions:

- **WACC in perpetuity** is **12%**
- **Average WACC** for **2009-2020** is **16%**
- **G** is **3%**
- **ROIC in perpetuity** is **13%**, which yields an economic spread of 1% - a conservative estimate compared to the current spread for British generation companies is above 3%

## Final formula for estimating GenCos' EV

$$EV_{(USD\ mln)} = \text{Coal capacity}_{(GW)} * (1 - \text{hours worked} / 280{,}000) * 1{,}500_{(USD/kW)} + \{ IC\ (2021)_{(USD\ mln)} * (13\% - 12\%) / (12\% - 3\%) \} / (1 + 16\%)^{12}$$

Where $IC\ (2021)_{(USD\ mln)} =$
$$\text{Total capacity}_{(GW)} * (1 - \text{hours worked} / 280{,}000) * (1{,}500_{(USD/kW)} * (1 + 5\%)^{12})$$

# Investment Ratings

The time horizon for target prices in Concorde Capital's research is 12 months unless otherwise stated. Concorde Capital employs three basic investment ratings: Buy, Hold and Sell. Typically, Buy recommendation is associated with an upside of 15% or more from the current market price; Sell is prompted by downside from the current market price (upside <0%); Hold recommendation is generally for limited upside within 15%. Though investment ratings are generally induced by the magnitude of upside, they are not derived on this basis alone. In certain cases, an analyst may have reasons to establish a recommendation where the associated range given above does not correspond. Temporary discrepancies between an investment rating and its upside at a specific point in time due to price movement and/or volatility will be permitted; Concorde Capital may revise an investment rating at its discretion. A recommendation and/or target price might be placed Under Review when impelled by corporate events, changes in finances or operations. Investors should base decisions to Buy, Hold or Sell a stock on the complete information regarding the analyst's views in the research report and on their individual investment objectives and circumstances.

| Concorde Capital ratings distribution | | |
|---|---|---|
| Buy | 55 | 46% |
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| Under Review | 6 | 5% |
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|---|---|---|
| Buy | 7 | 100% |
| Hold | 0 | 0% |
| Sell | 0 | 0% |
| Under Review | 0 | 0% |
| Total | 7 | 100% |

** Within the last twelve month period, Concorde Capital has obtained compensation from these companies for investment banking services.*

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