Energy Profile: Ukraine

### Production

Primary Production of Energy by Resources in 2013. (3555 PJ)

- Crude oil: 3.167 ktoe (26%)
- Natural gas: 16.022 ktoe (48%)
- Coal: 40.674 ktoe (19%)
- Nuclear: 21.848 ktoe (2%)
- Hydro: 1.187 ktoe (0.1%)
- Geo, solar: 104 ktoe (1%)
- Biofuels, waste: 1.924 ktoe (1%)

### Consumption

Gross Inland Consumption by Fuel Type in 2013. (4856 PJ)

- Crude oil: 3.978 ktoe (36%)
- Natural gas: 39.444 ktoe (34%)
- Coal: 41.625 ktoe (19%)
- Nuclear: 21.848 ktoe (5%)
- Oil products: 5.928 ktoe (2%)
- Hydro: 1.187 ktoe (0.05%)
- Geo, solar: 104 ktoe (1%)
- Biofuels, waste: 1.879 ktoe (1%)

### Final Energy Consumption by Sectors in 2013. (2729 PJ)

- Industry: 21.860 ktoe (34%)
- Transport: 11.855 ktoe (4.02%)
- Residential: 23.456 ktoe (18%)
- Services: 5.760 ktoe (36%)}
- Agriculture: 2.234 ktoe (9%)
- Fishing: 8 ktoe (0.02%)

### Electricity Consumption by Sectors in 2013. (138 TWh)

- Industry: 58.584 GWh (43%)
- Transport: 8.690 GWh (6.5%)
- Residential: 41.378 GWh (30%)
- Services: 24.911 GWh (18%)
- Agriculture: 3.936 GWh (3%)
- Fishing: 32 GWh (0.02%)

The need for electricity generation is expected to double over the period from 2010 to 2030. Ukraine's energy sector is in need of large and sustained investment to ensure its modernization, security, and competitiveness. The scale of investment required is on the order of EUR 170 billion in the period to 2030.

Ukrainian Parliament adopted the Law of Ukraine "On Principles of Functioning of the Electricity Market of Ukraine" No. 663-IV (the "Law"), which became effective from January 2014. The main innovation of the Law is the creation of a new market model which consists of: bilateral market, "day in advance" market, balancing market, retail market, and ancillary services market. Implementation of the new market model will be gradual.

Support schemes for RE are tax incentives, exemptions from corporate tax, VAT exemptions on certain imports and a 75% reduction of property tax on the purchase of land for RE projects. The Electricity Law introducing Local Content Requirements was adopted in 2011 and amended in 2014. It imposes the usage of a percentage of locally produced raw materials, fixed assets and services in the development of renewable energy facilities (50% for wind, solar, and biomasses commissioned after July 2014) as a precondition for receiving the feed-in tariff for the renewable electricity generated.

With the adoption of Directive 2009/28/EC, Ukraine committed to a binding 11% target of energy from renewable sources in gross final energy consumption in 2020 compared with a share of 5.5% in 2009. The draft Updated Energy Strategy to 2030 proposes a reduction of energy intensity of 30% to 35% by 2030.

The Ukrainian electricity sector consists of 51 generators of electricity 12% of installed capacities goes to Combined Heat and Power (CHP).

Energy prices in Ukraine are lower than in OECD countries. There are no specific energy taxes in Ukraine except the value added tax (VAT) of 20%. The price of electricity in Ukraine will increase from 27.1 kopeks per kilowatt/hour in 2012 to 54.4 kopeks per kilowatt/hour in 2020. In practice the electricity sector remains over-regulated and over-subsidized.

### Electricity Production Mix in 2013. (194 TWh)

- Oil: 535 GWh (0.17%)
- Gas: 16.039 GWh (0.07%)
- Coal: 80.418 GWh (4.15%)
- Nuclear: 90.137 GWh (4.62%)
- Hydro: 14.472 GWh (0.74%)
- Solar PV: 570 GWh (2.93%)
- Biofuels: 101 GWh (0.52%)
- Wind: 639 GWh (3.32%)

### Wind Power

- Wind < 600 kW: 6.3 €/kWh
- Wind 600kW – 2000 kW: 7.5 €/kWh
- Wind > 2000 kW: 11.3 €/kWh

### Solar Power

- Solar ground mounted: 46.5 €/kWh
- rooftop units > 100 kW: 44.6 €/kWh
- rooftop units < 100 kW: 42.7 €/kWh
- Energy from biomass: 12.4 €/kWh
- Small hydropower plants: 7.8 €/kWh

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