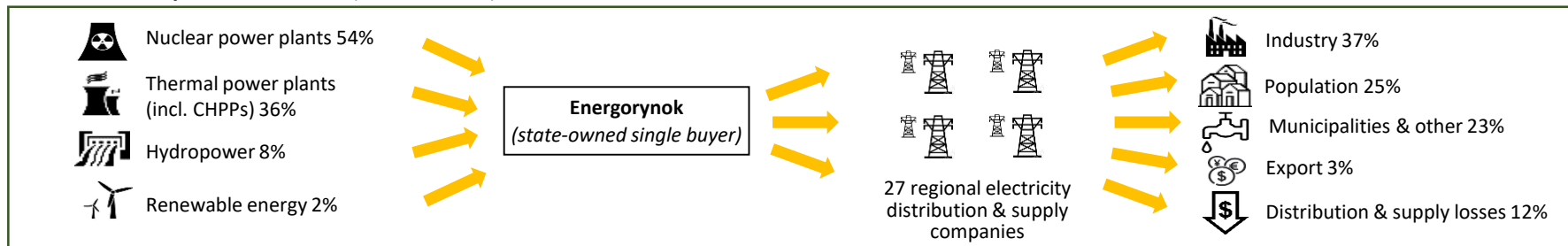


ENERGY MARKET REFORM IN UKRAINE

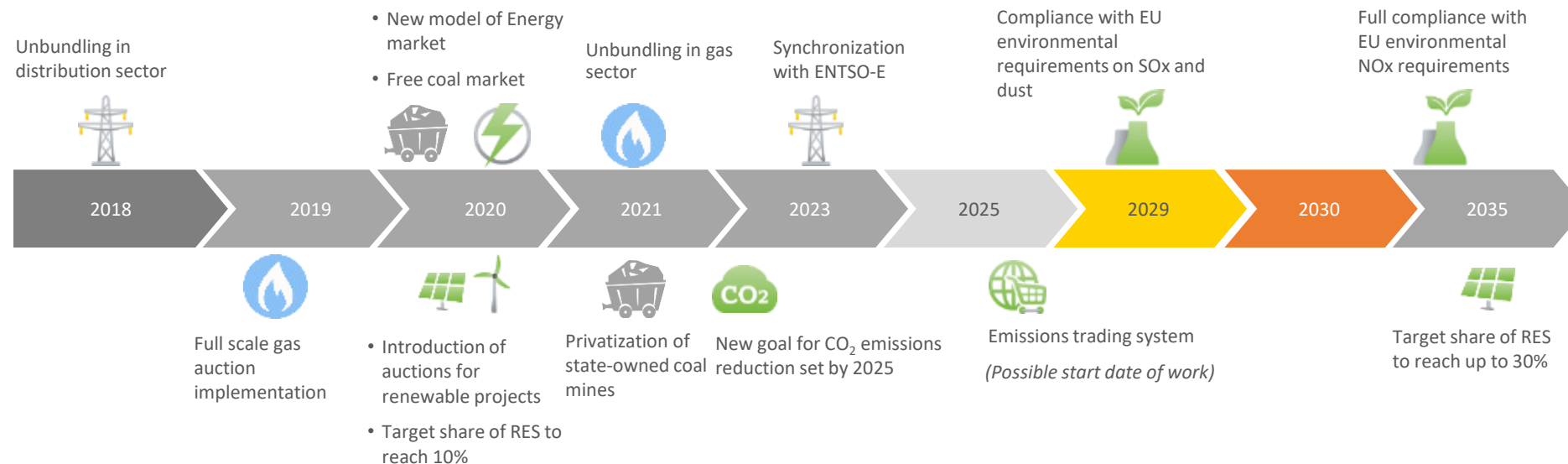
Convergence with EU Energy Market Regulation

- Ukraine is a contracting party to the Energy Community treaty and, as such, is under a contractual obligation to transpose into national legislation and regulation the EU's directives for the energy sector as contained in the Third Energy Package
- The key objective of the Energy Community Treaty is to harmonise and integrate the energy markets in Ukraine with those of the EU
- The country has started the process of energy market reform in 2017
- Starting from 2019 electricity generation, distribution and supply are being unbundled and the markets for energy supply liberalised

Current Electricity Market Structure (until mid-2019)



Milestones in Energy Market Reform



Decarbonisation in Ukraine: Taxation or Emissions Trading?

Ratification by Ukraine

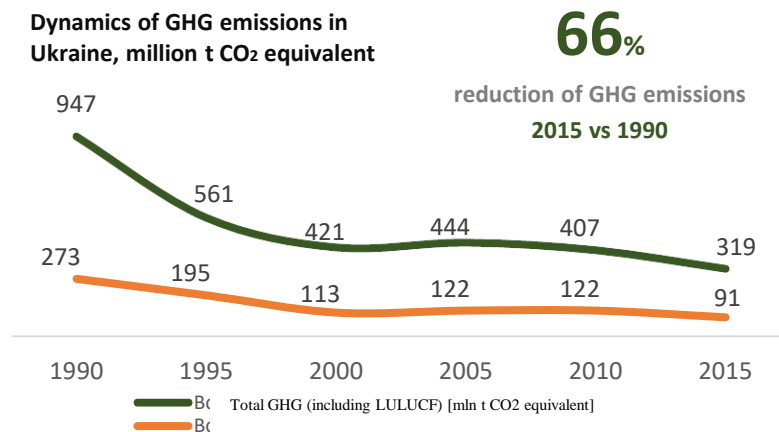
United Nations Framework Convention on Climate Change (UNFCCC)	Kyoto Protocol to the United Nations Framework Convention on Climate Change	EU-Ukraine Association Agreement	Paris Climate Agreement
1996	2004	2014	2016
Law of Ukraine No. 435/96-BP of 10/29/1996	Law of Ukraine No. 1430-IV of 2/4/2004	Law of Ukraine No. 1678-VII of 9/16/2014	Law of Ukraine No. 1469-VIII of 7/14/2016

- In accordance with the provisions of the Paris Climate Agreement, each party independently determines quantified emission reduction commitments in the form of Nationally Determined Contributions (NDCs) revised every five years to set more ambitious targets. At present, the NDC of Ukraine (being the process of updating) is **not to exceed 60% of the level of GHG emissions in 1990.**
- Within the framework of the Association Agreement, Ukraine is obliged to implement **Emissions Trading Scheme (ETS) aimed at reducing greenhouse gas emissions**
- ETS provides for trading/allocation of GHG emission allowances at the national level among major emitting parties in the market

Road map for the adoption of regulatory acts on ETS (expert assessment):

- 2019** – adoption of the Law of Ukraine On the Basics of Monitoring, Reporting and Verification of Greenhouse Gas Emissions and related by-laws
- 2023** – 3-year testing procedures for monitoring and reporting. Data collection for the configuration of the future ETS
- 2024** – adoption of the Law of Ukraine On the Functioning of the ETS and the corresponding by-laws
- 2025** – launch of ETS in Ukraine

Dynamics of GHG emissions in Ukraine, million t CO₂ equivalent



* LULUCF – Land-Use, Land-Use Change and Forestry

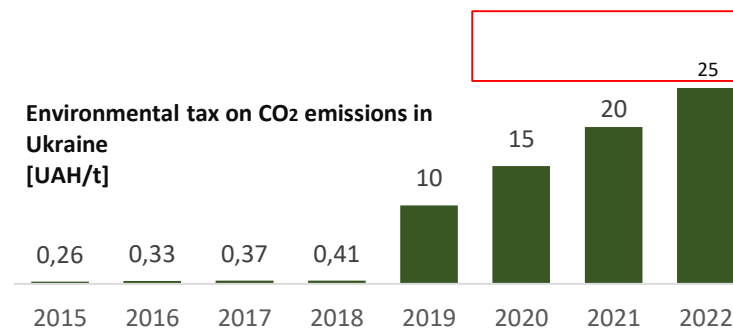
Source: UKRAINE'S GREENHOUSE GAS INVENTORY 1990-2016, Annual National Inventory Report

In 2018 the Strategy for low carbon development of Ukraine through to 2050 was adopted, which provides for a significant reduction of GHG emissions due to the reduction of electricity generation with the use of traditional energy resources.

Ukraine has a tax on CO₂ emissions. Companies participating in the ETS are exempt from carbon tax. In November of 2018 amending the Tax Code of Ukraine, the carbon tax has significantly increased since 2019.

24 times Increase of environmental tax on CO₂ 2019 vs 2018

Environmental tax on CO₂ emissions in Ukraine [UAH/t]



Source: 2019-2022 – Law of Ukraine No 9260 of 11/05/2018

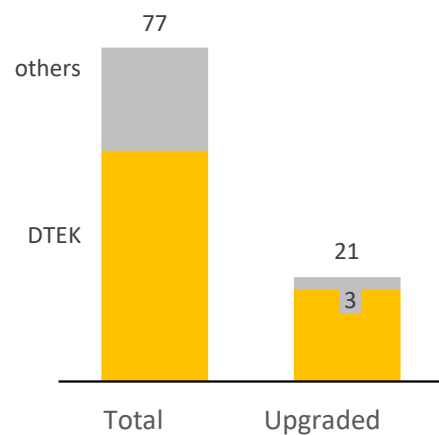
DTEK ENVIRONMENTAL STRATEGY



In 2018 DTEK approved Environmental Strategy aimed at reducing the environmental impact of DTEK enterprises.

Modernization of thermal generation

Number of upgraded power units

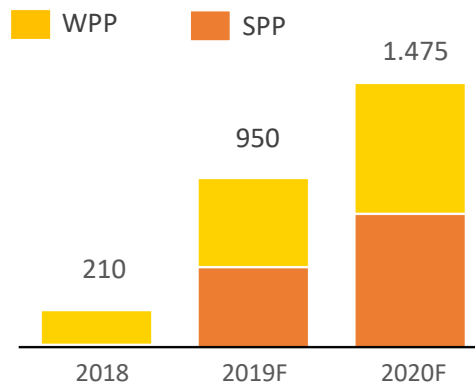


- DTEK is a leader in upgrading of power units in Ukraine.
- DTEK has upgraded 21 power units, while only 3 power units have been upgraded in Ukraine.

94% of all enterprises that have upgraded the equipment are owned by DTEK.

Renewable energy

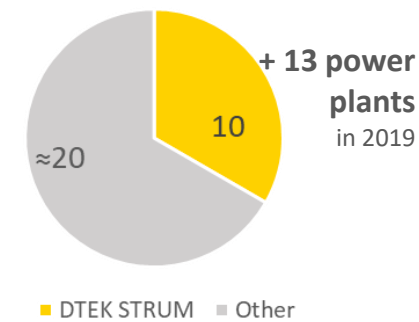
New capacities, MW



DTEK is the largest producer of renewable energy in Ukraine.

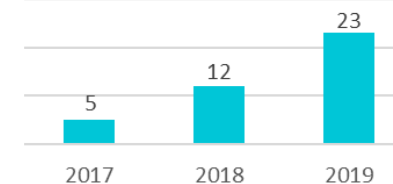
Electric vehicles

Charging stations in Ukraine ¹



¹ above 50 kW

Number of electric vehicles, DTEK



DTEK promotes the use of electric vehicles and owns the largest fleet of electric vehicles in Ukraine.