LIETUVOS ORO UOSTAI
VNO KUN PLQ

NET ZERO STRATEGY

AND IMPLEMENTATION PLAN

2050

IMPLEMENTED INITIATIVES TO REDUCE CO_2: **SCOPE 2**

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The lighting systems efficiency:

- The program was launched in 2017, when part of VNO apron and aircraft stands' lights were converted to LED.
- In 2020–2021, all lamps were converted to LEDs.
- New LED signal lights were installed during the reconstruction of the runway in 2017, saving about **92 MWh** of electricity per year, corresponding to **35 t CO2/year**.

IMPLEMENTED INITIATIVES TO REDUCE CO_2: **SCOPE 2**

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- A 25 kW solar power plant on the roof of the VIP terminal provides about 14% of the VIP terminal's energy demand, saving about 0.6 t of CO_2/year;
- Regular energy audits of buildings and installations are carried out every four years;
- The building management system was first installed in 2020 and is constantly being updated and improved by gradually connecting the VNO terminal premises. It is planned to complete the installation together with the construction of the new T4 terminal.

IMPLEMENTED INITIATIVES TO REDUCE CO_2: **SCOPE 3**

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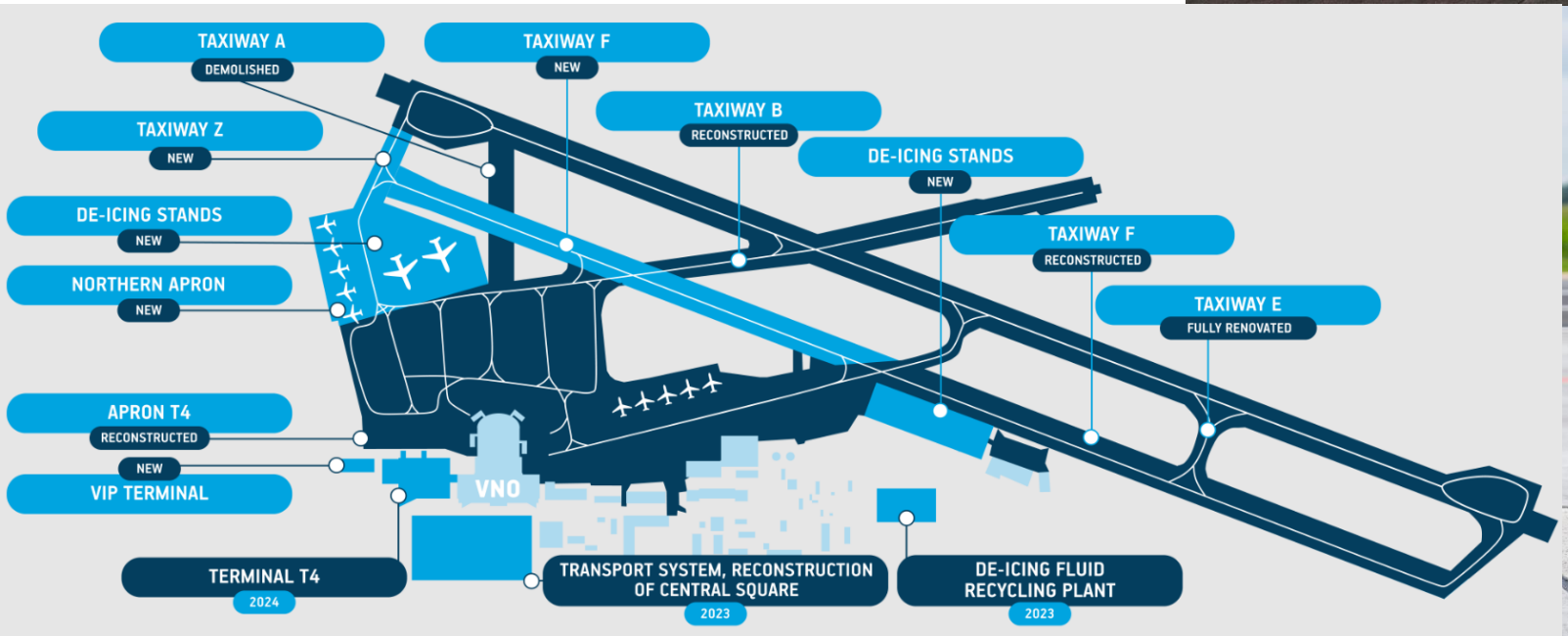
- Underground electric GPU's. In total, 33 aircraft stands are equipped with electricity supply;
- New and reconstructed runways: each taxiing operation is shortened by approx. two minutes (twice less)
- Four dedicated aircraft de-icing pads.



THE FOUNDATION OF **NET ZERO STRATEGY**

LIETUVOS ORO UOSTAI
VNO KUN PLQ

01

Decarbonized transport

Electromobility and/or alternative renewable fuels

02

Energy efficiency

Monitoring, controlling and reducing energy consumption by investing in energy-saving solutions

03

Renewable energy

Replace fossil fuel-derived energy with renewable energy systems

04

Elimination of residual emissions

By 2030 – off-setting; by 2050 – CO_2 sequestration and capture

TRANSPORT

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- ✓ **Fleet renewal program:**
  - In 2023 new light-weight vehicles leasing contract, including 5 electric and 8 hybrids;
  - 7 new snow plowing machines in 2025;
  - 8 electric mobile GPU's, replacing old diesel ones (-125 t CO_2);
- ✓ **Renewable diesel**, starting from 30% of consumption in 2024, suming up to 100 % by 2030;
- ✓ Installation of **electric vehicle charging** stations and related **infrastructure**, within the framework of the CEF-financed project:
  - Electric buses charging station (1.8 MW);
  - 5 dual charging points and 5 three-phase power sockets with a total power of 0.36 MW for charging airfield special vehicles, equipment and mobile GPUs.

ELECTRICITY

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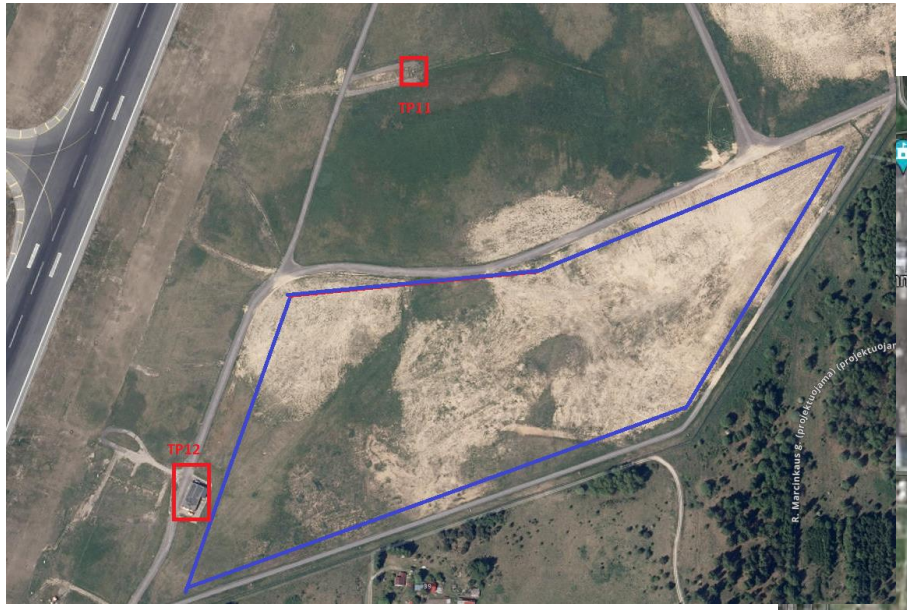
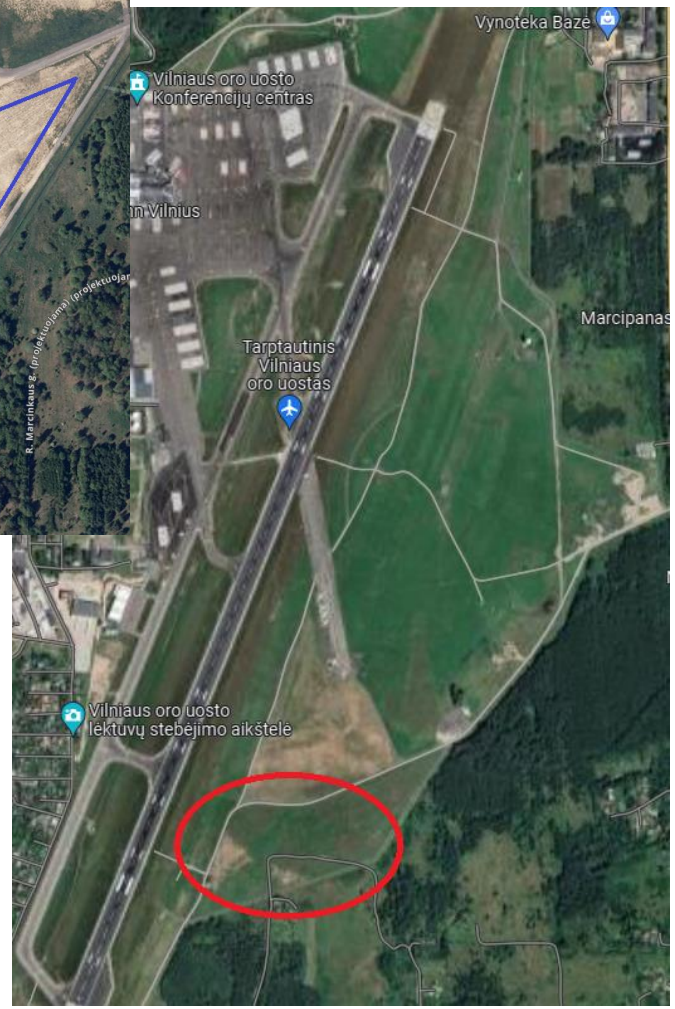
- 2024, 2025 – obtainment of guarantees of origin (covering not less than 80 % of consumption)
- 2025-2026: installation of 4.5 MW solar power plants with batteries (I phase – 2.2 MW solar plants; II phase – 4.5 MW with batteries); coverage of 35% of VNO needs;





- 2026: acquisition of a remote wind power plant, to cover the rest 65%
- Solar PV on the roof of new T4 terminal (488 kW) in 2026
- Solar PV's on all new buildings (following the requirements set by EU *Solar energy strategy*)

DECARBONISATION OF **SCOPE 3** EMISSIONS

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- Within the framework of the CEF-financed project, 4 double charging points with a total capacity of 0.24 MW will be installed airside for the ground handling companies and other partners
- 5 FGPU's will be replaced by new ones in passenger boarding bridges (PBB). 2 FGPU's will be installed at the new VNO departure terminal building (T4) (following the requirements set by *Regulation on the deployment of alternative fuels infrastructure (AFIR)*)
- Currently 28 of 33 aircraft stands are equipped with electric supply; following the AFIR requirements, 6 FGPU's will be installed during the military mobility project
- 10 new electric buses for airside in 2026; will be bought by VNO and leased to ground handlers
- SAF supply plan in 2024; to be ready for 2% (hopefully) in 2025
- PCA's at PBB's, following the TEN-T regulation; for VNO the need is for 7 mobile or stationery PCA's

DEICING RUNOFF TREATMENT PLANT

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- Two dedicated deicing pads with deicing runoff collection system in the northern and southern apron of **Vilnius airport**;
- Automatic analyzers of the propylene glycol concentrations, directing the less polluted runoff to city's central collection system, and more polluted runoff – to the treatment plant;
- Approx. 4 300 m^3 of propylene glycol polluted surface runoff/season; Approx. **940 m^3 of extracted propylene glycol/water solution** (50:50)

Potential users:

- Producers of polyester resins
- Food and drug industry (production of coffee-based drinks, liquid sweetener, ice cream, etc.);
- Antifreeze (environment-friendly version).

PLAN FOR NEUTRALITY AND NET ZERO

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