

## TGF Project Profile : Viru Nigula Wind Power Development, Estonia

### The Project Activity

The Viru Nigula wind power development project, is a Joint Implementation project developed between Estonia and the investor countries of the Baltic Sea Region Testing Ground Facility (Iceland, Norway, Sweden, Denmark, Finland and Germany). The JI project was prepared by NEFCO on behalf of TGF (in its capacity as Fund Manager to the Facility) and the Swedish Energy Agency, STEM (acting on behalf of the Swedish government), as joint purchasers. The project developer and owner is the privately owned company, OÜ Viru Nigula Tuulepargid which is owned by Vardar Erus (a joint venture company between Norwegian investor Vardar and NEFCO).

The wind farm "Viru-Nigula" will be located at the north coast of Estonia, some 125 km east of Tallinn. The distance to the sea border is about 7 km and the height above sea level is about 60 m. The location is suitable for wind power due to its verified good wind conditions, presence of an electrical grid and absence of environmental or other constraints.

### Technology

The project consists of 8 wind turbines with a total production capacity of 24,0 MW. The wind turbines will be WinWinD, WWD-3 (model NH90-RD100) of 3,0 MW. The wind farm will be connected to the 10 kV net of the Estonian Energy supplier through an own power station.



*WinWinD Turbine (Photo from [www.winwind.fi](http://www.winwind.fi))*

### Nature of Emission Reductions

The Viru Nigula wind project will generate emission reductions through the displacement of carbon intensive electricity.

The investment project is expected to result in an emission reduction of AAUs 50,000 and ERUs 334,000 tCO<sub>2</sub>e. The emission reductions are jointly purchased by the TGF and STEM.

The project uses the Approved Consolidated Methodology of the CDM for grid connected renewables, and has been determined by TÜV SÜD. For a full explanation of the methodology used please refer to the Project Design Document.

### Contribution of Carbon Finance

Investment costs of the project are estimated at EUR 25,7 million. The investments costs include erection of the wind farm, power station, and connection to grid and project development. Financing is based on own capital resources, bank loan and sales of CO<sub>2</sub> reduction units.

Carbon finance was integral to the financing of the project given the insufficient financial return and level of uncertainties relating to tariffs. The project also needed a large up-front payment to achieve financial closure.

Carbon finance contributed approximately 5% of the capital invested.

### For Further Information

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For General Information on the TGF, visit <http://www.nefco.org/tgf>