NORDION ENERGI

The role of H2 towards 100% green energy in Sweden

IKEM Annual Conference

Berlin 18th September 2024

Nordion Energi consists of
Swedegas, Weum, Falbygdens Energi and Nordion Energi H2

Nordion Energi

Powering a changing society

- Headquartered in **Malmö, Sweden**
- **Regulated** core business with operates Sweden's gas network since **1985** with **100 GWh** of gas storage
- Aims to be **a forerunner with a 100% green gas network** by 2030
- Four business areas:
  - **Swedegas**: Sweden's Gas Transmission Systems Operator – **TSO**
  - **Weum**: The largest of six Gas Distribution Systems Operators – **DSO**
  - **Falbygdens Energi:** Electricity Distribution Systems Operator – **DSO**
  - **Nordion Energi H2:** Developing underground hydrogen infrastructure
- Owned by European Diversified Infrastructure Fund II, managed by **Igneo Infrastructure Partners**

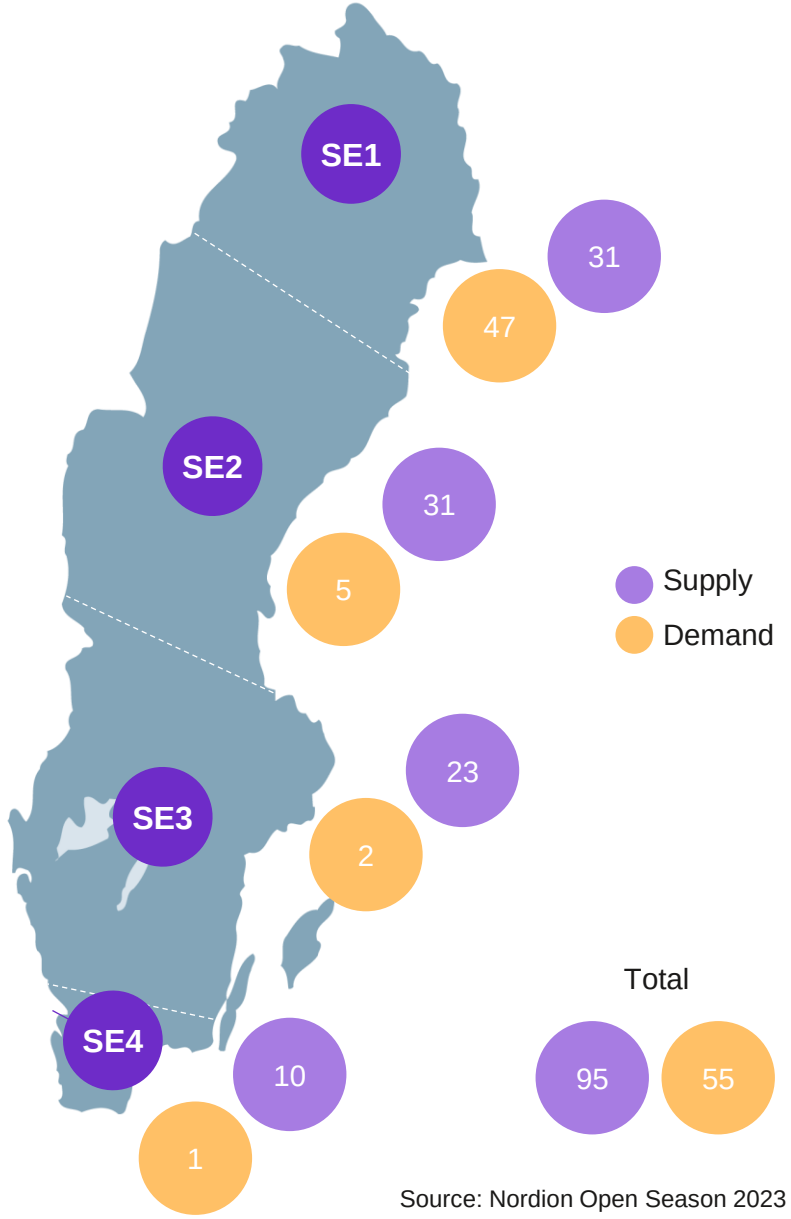
Trusted gas network operator since 1985

Why Hydrogen Infrastructure?

Key Drivers

- Sweden is a renewable **energy powerhouse in Europe** and the largest electricity exporter in Europe in 2022 with 33TWh
- **Innovative business climate** spurring new industrial initiatives and early adopters, for example of H2 in industrial decarbonisation
- **Supply & demand imbalances** are expected between regions in-country and between countries
- **Well planned and executed cross-border hydrogen infrastructure** is considered critical in order to:

1. Ensure **green competitive industries** catering to national and European demand **for green steel, mining, fertilizers and chemicals**
2. Enable new **innovation and emerging industries**, for example **e-fuels**
3. **Balance the energy system** on a Nordic and European level



Source: Nordion Open Season 2023

Nordic Hydrogen Route

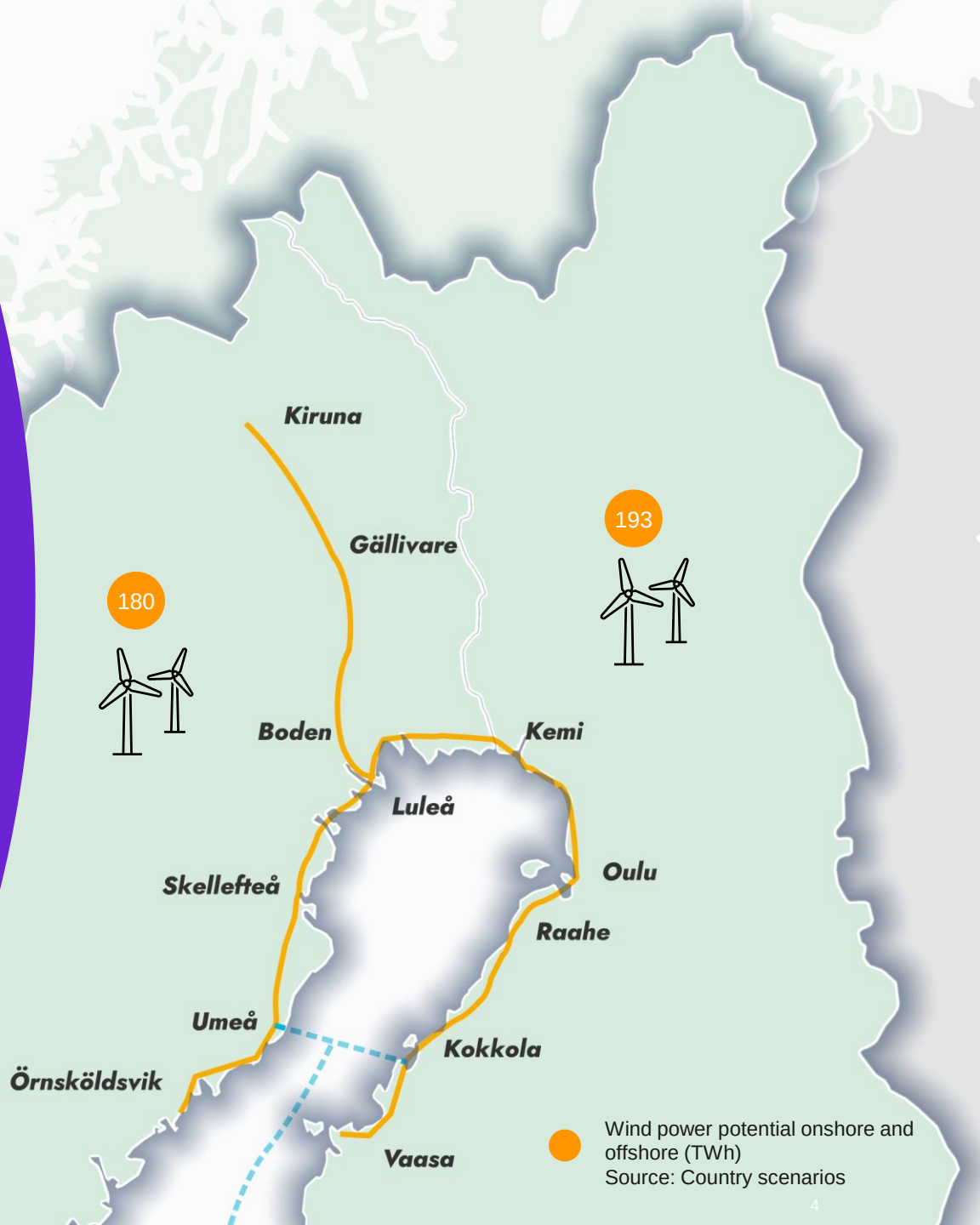
Partnership between Gasgrid and Nordion Energi

~1,000 km
dedicated hydrogen pipelines

20 Mt CO2e / year
reduced emissions by 2050, 20% of total emissions in Sweden and Finland

25,000 new jobs
by 2030, and 46,000 by 2040

Nordic energy security
is strengthened by replacing fossil fuels with new, clean energy carriers



Baltic Sea Hydrogen Collector

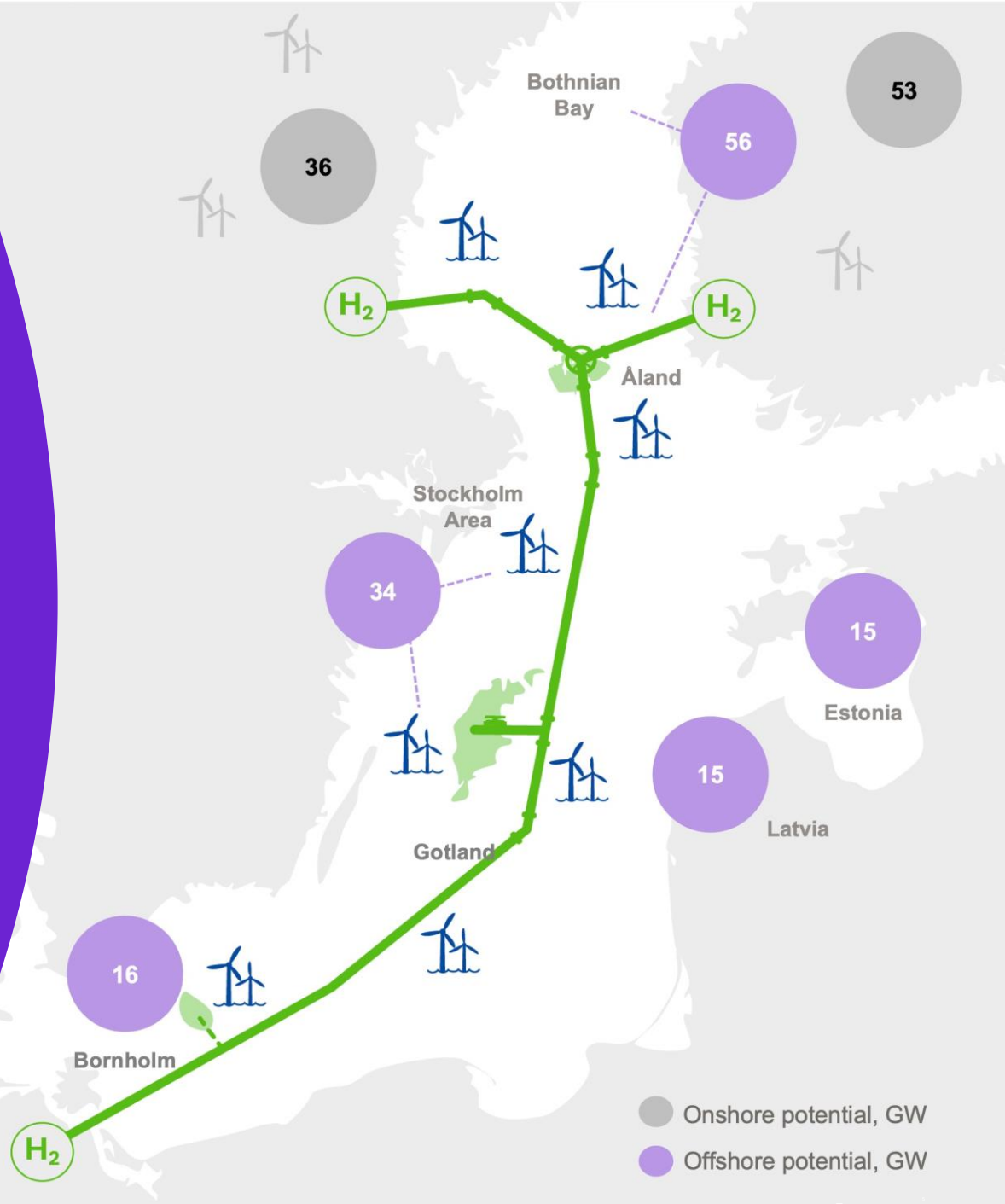
Partnership between Gasgrid, OX2, Copenhagen Infrastructure Partners and Nordion Energi

1,250 km
dedicated offshore hydrogen pipelines

66bn EUR
investments in wind power and electrolysis enabled

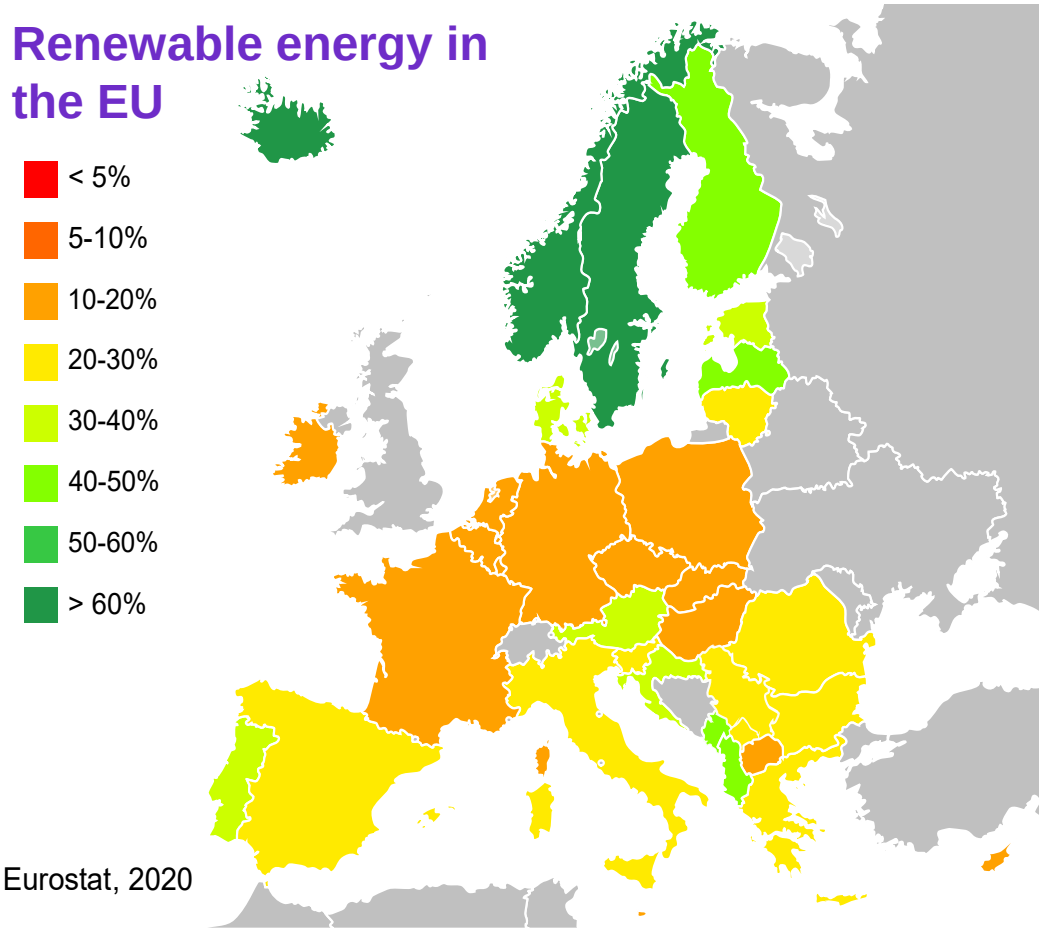
5 MT
annual transport capacity or 50% of the total REPowerEU domestic H2 target

75,000 direct and indirect jobs across the hydrogen value chain



Nordic H2 - Supporting European Energy Independence

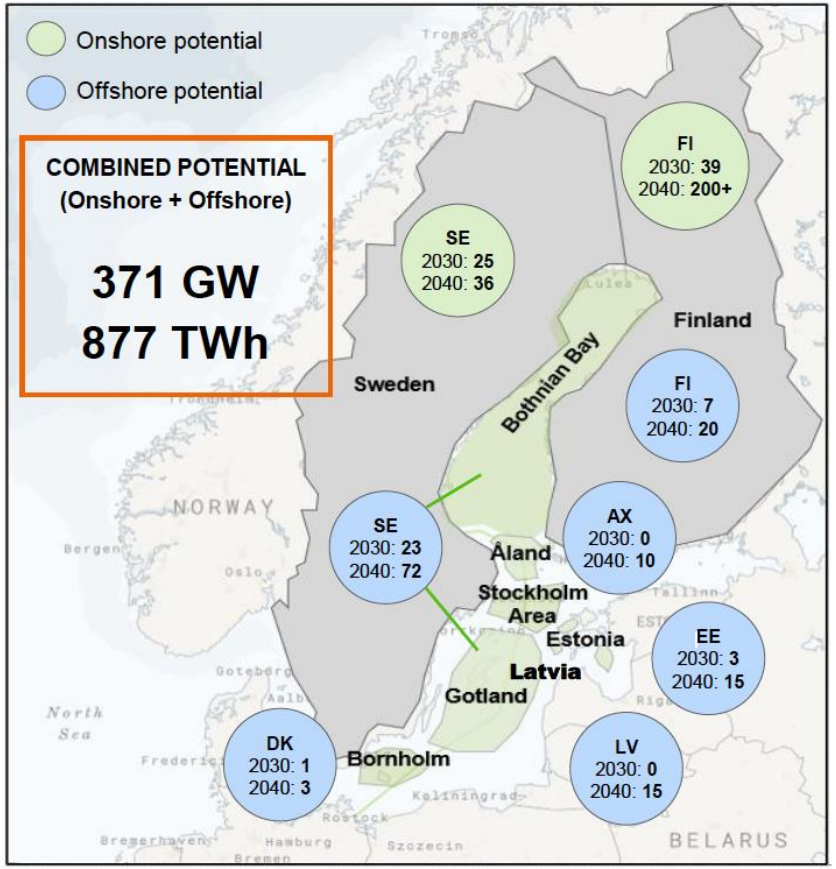
Renewable energy in the EU



Eurostat, 2020

The Nordics are a **renewable energy powerhouse** that can meet a significant amount of Europe's domestic hydrogen production target.

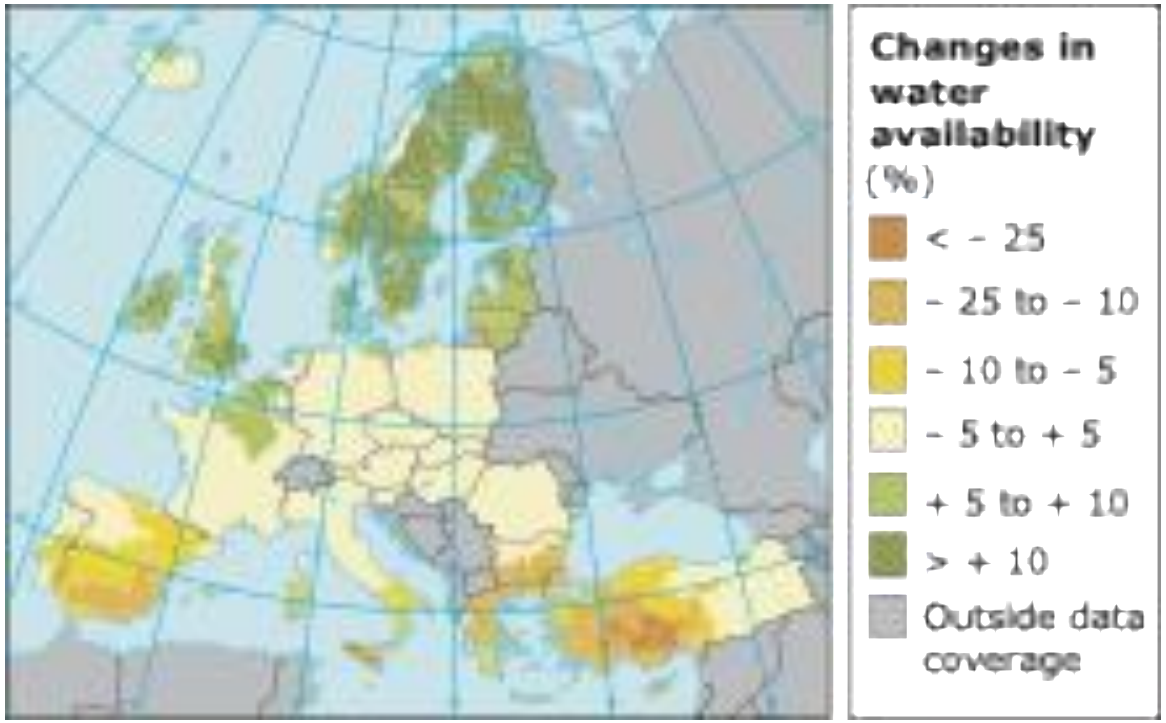
Identified accumulative renewable potential[1] (GW)



Sources

- Offshore Sweden and Finland: **4C Offshore**
- Offshore Estonia: **Invest in Estonia**
- Onshore Sweden: **Swedish wind energy association**
- Onshore Finland: **Finnish wind power association & Fingrid grid applications**

Nordic H2 - Supporting European Values



Source: European Environment Agency

Thank you.

For more information:

Mox Murugan
mox.murugan@nordionenergi.se