Country indicators

- 5.4 million inhabitants – sparsely populated, highly industrialised
  - Cold climate, lakes and forests – population mainly resides in the southernmost tip
  - Industrialised – pulp and paper, metals, telecoms, IT, electronics, etc.
  - One of the most research-intensive countries in the world

- An energy-intensive economy
  - Finland’s energy consumption per capita is the highest in the IEA.
  - Energy intensity per GDP – 2\textsuperscript{nd} highest in IEA (0.20 toe per GDP, in USD)

- And yet poorly endowed with indigenous hydrocarbon resources
Energy security is a top priority

- A highly diversified energy mix (TPES)
  - 4th lowest share of fossil fuels in IEA – oil 26%, coal 11%, gas 10% (of TPES)
  - Finland leads all IEA countries in terms of biofuels share in its energy mix – 23%
  - Nuclear accounts for 17%, and is growing; Peat accounts for 6%

- Electricity – well integrated with the wider NordPool

© OECD/IEA 2013
Decarbonising the economy – Renewables

- **2020 Target:** 38% of gross final energy consumption
  - Transport: 20% RES by 2020, twice the mandatory share defined by EU
  - Heating: 47% from renewable sources; Electricity: 33% from renewable sources

- **Forestry sector is key**
  - will contribute half of the additional 38 TWh between 2005 and 2020

- **Hydro potential is limited**
  - easy sites are taken; strict conservation rules

- **Ambitions for wind power**
  - target of 6 TWh by 2020; 9 TWh by 2025
Decarbonising the economy – Nuclear

- Expansion plans
  - Olkiluoto 3 already under construction – delays, now scheduled for 2016
  - Parliament decisions-in-principle for 2 new plants

- Excellent planning/consenting – government is trusted

- Share of electricity produced by nuclear set to grow:
  - from 28% in 2010...
  - ... to over 30% in 2020
  - ... and to 60% by 2025?
Decarbonising the economy – Energy efficiency

- Energy and Climate Change Strategy
  - Aim to reverse growth in final energy consumption
  - Target to save approximately 11% of total final consumption by 2020
    - Compared to the business-as-usual scenario

- National Energy Efficiency Action Plan (NEEAP)
  - Outlines detailed measures across all sectors
  - Very strict building codes (due to cold climate)
  - Extensive Voluntary Agreements with industry
Deepening regional integration

Electricity

- The entire Nordic area had one common electricity price during 31% of the time in 2012, up from 25% in 2011 and 18% in 2010
- On the other hand, strategic aim to end electricity imports from Russia

Natural gas

- Only one supply route, from Russia – security of supply concern
- Baltic Energy Market Interconnection Plan (BEMIP) projects:
  - BalticConnector pipeline between Finland and Estonia
  - Shared LNG terminal in the Eastern Baltic region
  - Access to gas storage in Latvia

Some compliance issues with EU 3rd Package to resolve
Our key recommendations (1/2)

The government of Finland should

- Continue to address energy security concerns, pursuing its focus on key pillars of bioenergy and nuclear

- Maintain its drive to improve energy efficiency, notably through a stronger focus on the transport sector
Our key recommendations (2/2)

The government of Finland should

- Find a mutually acceptable solution at an EU level regarding the discussion on sustainability criteria for biomass

- Seek to develop the regional integration of its gas market, building on the example of its successful regional integration in electricity markets