



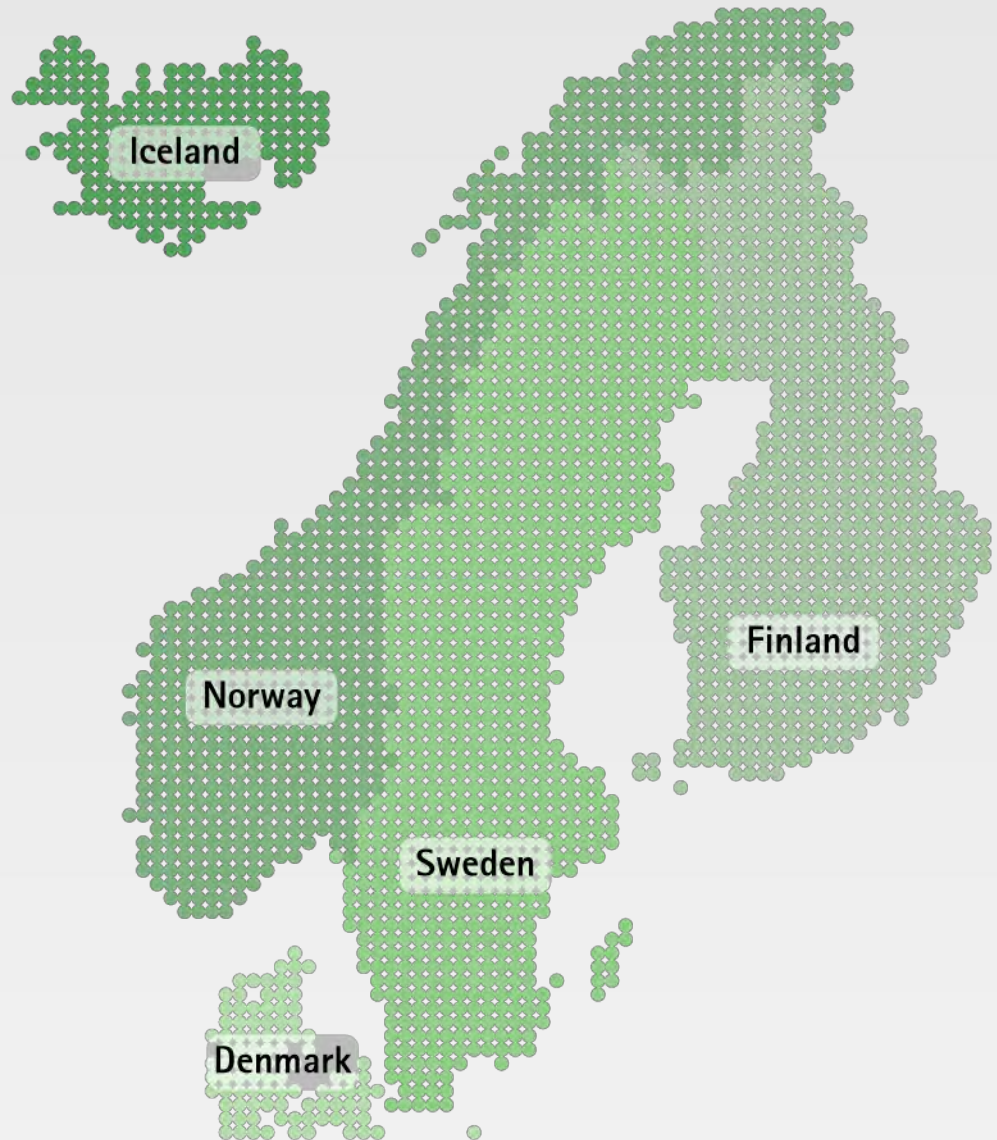
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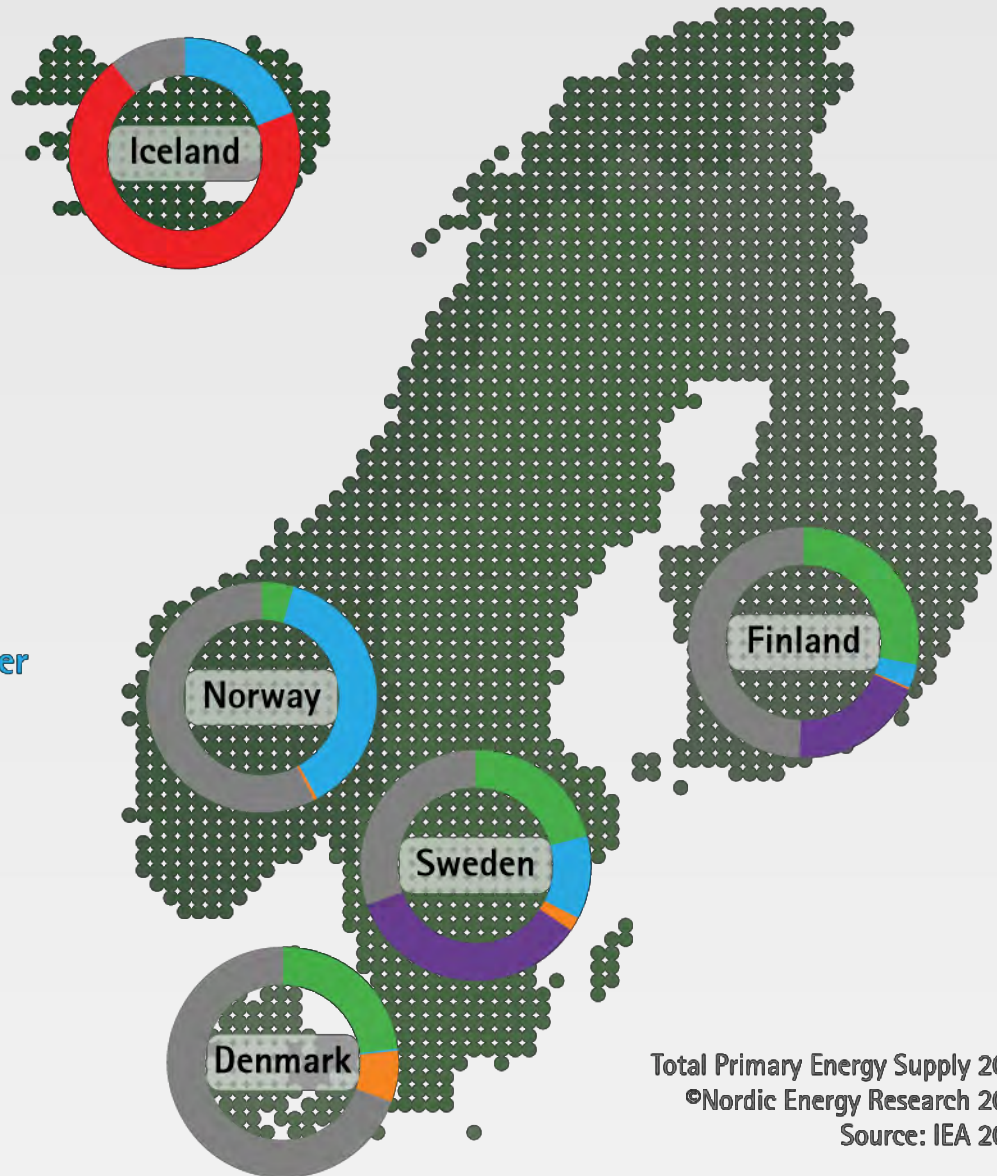
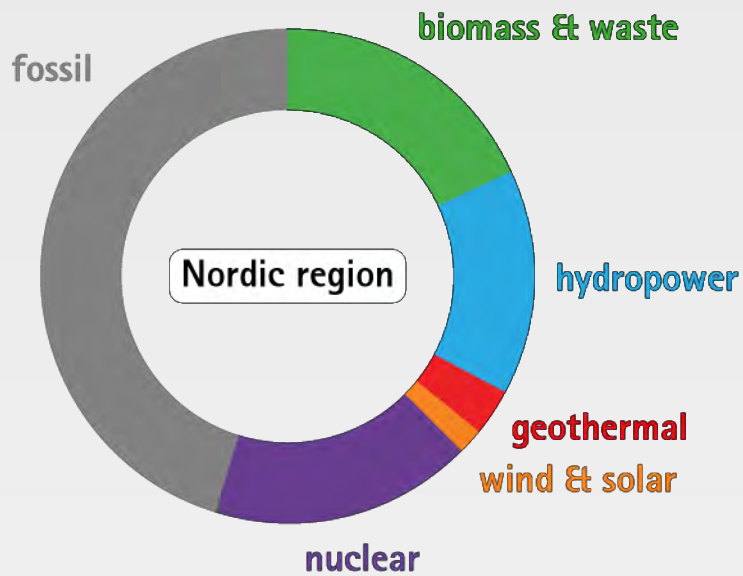
**What the Nordics have achieved
in energy - and what they
have yet to achieve**

Hans Jørgen Koch

Executive Director, Nordic Energy Research
19.05.2016, Bonn



The Nordic energy mix



Total Primary Energy Supply 2014
©Nordic Energy Research 2015
Source: IEA 2015

Key energy trends

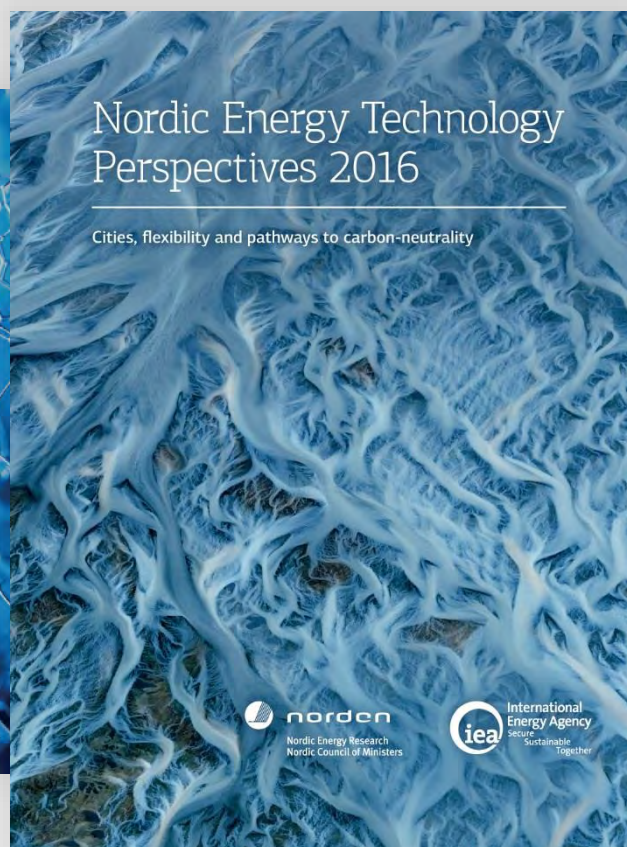
- Co-benefits drive policy
- Cities and regions lead
- Paris Agreement
- Renewables surge
- Decoupling of GDP and CO₂
- Low oil prices
- Low electricity prices in Europe
- Energy Union

\$13.5 trillion market for low-carbon technologies & efficiency to 2030

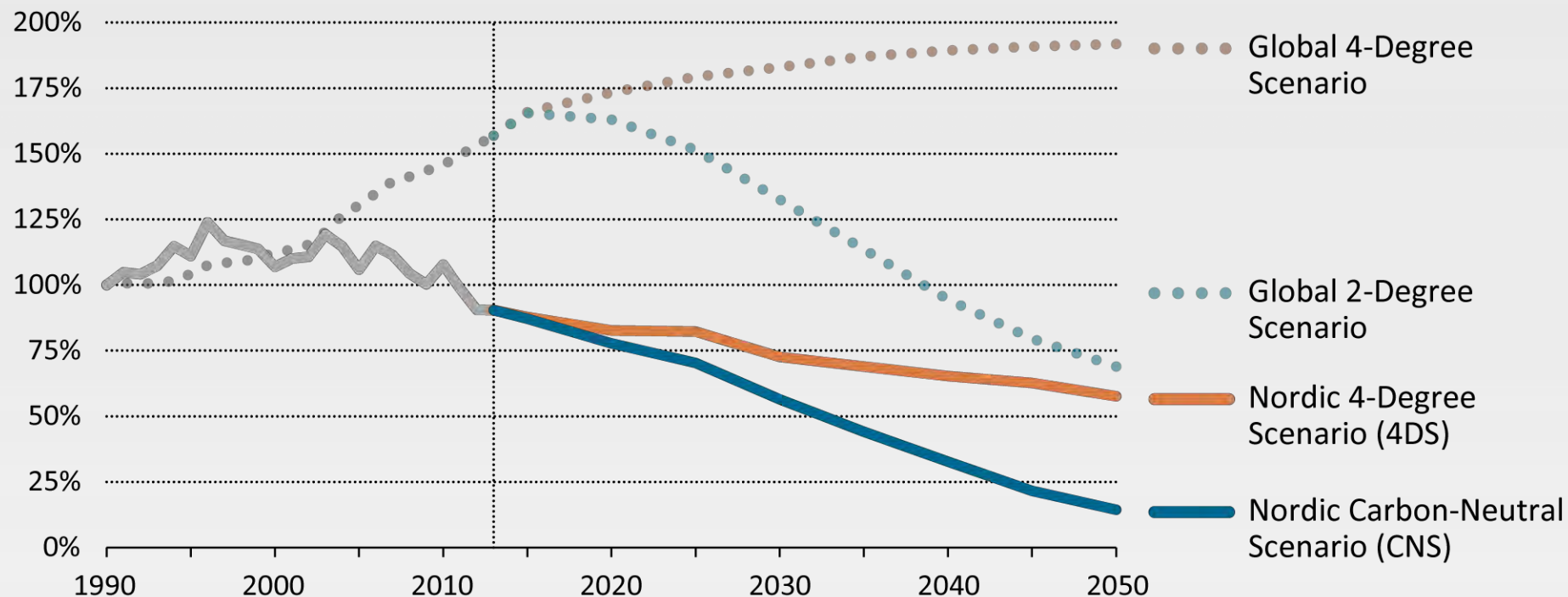


189 countries made pledges to the COP21 Paris climate agreement

Bridging global and national analyses

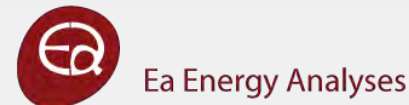


Nordic and global CO₂ emissions



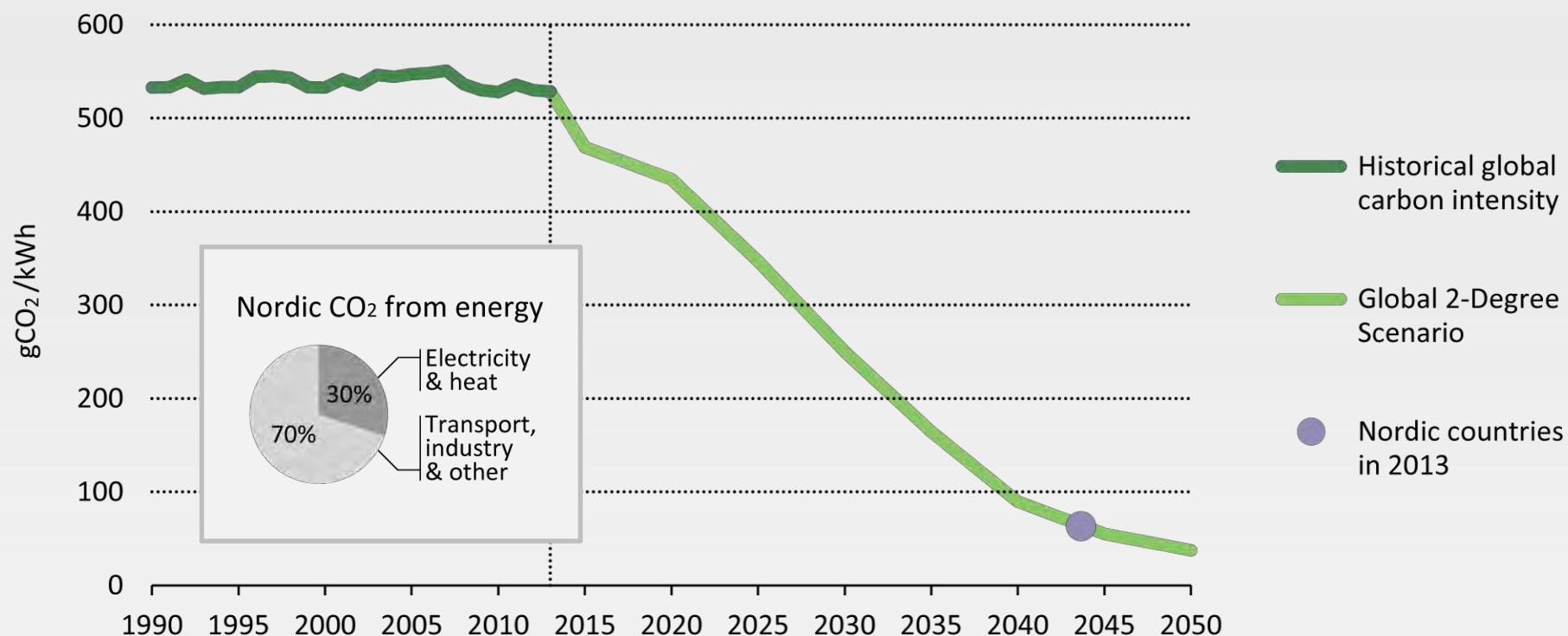
In the Carbon-Neutral Scenario (CNS), Nordic CO₂ emissions drop by 85% in 2050 compared with 1990 levels

Partners in Nordic Energy Technology Perspectives 2016



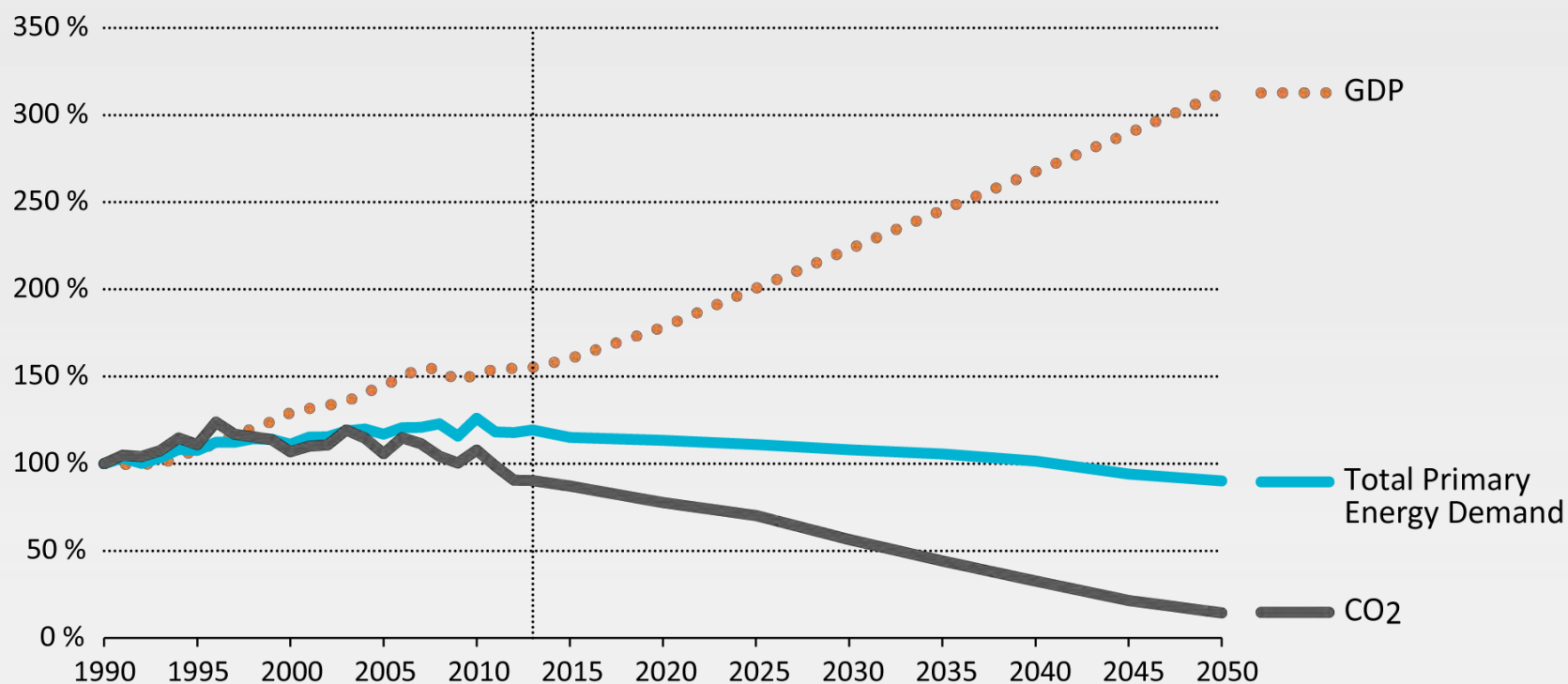
30 years ahead on electricity

Global carbon intensity of electricity (gCO₂/kWh)

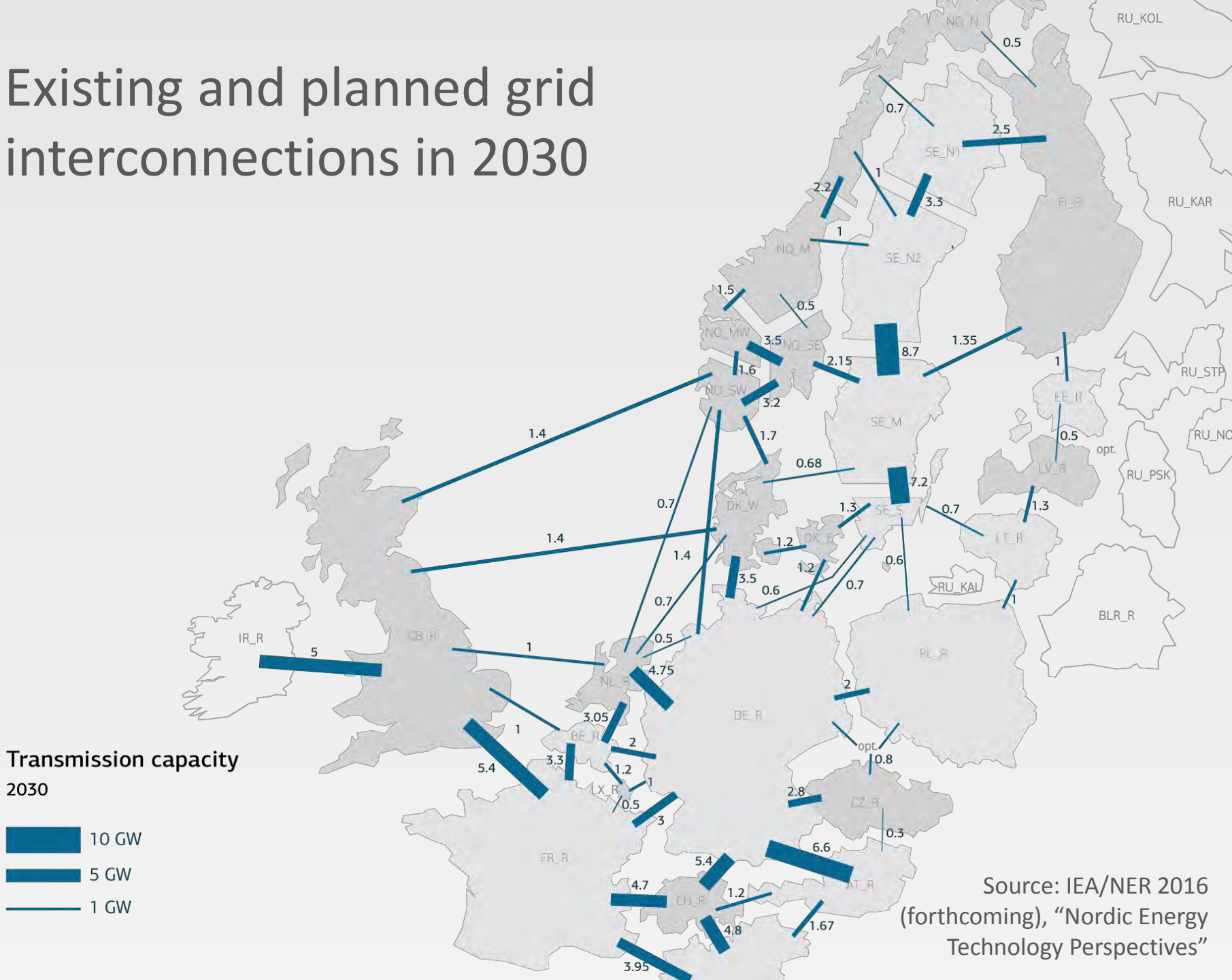


Decoupling pioneers

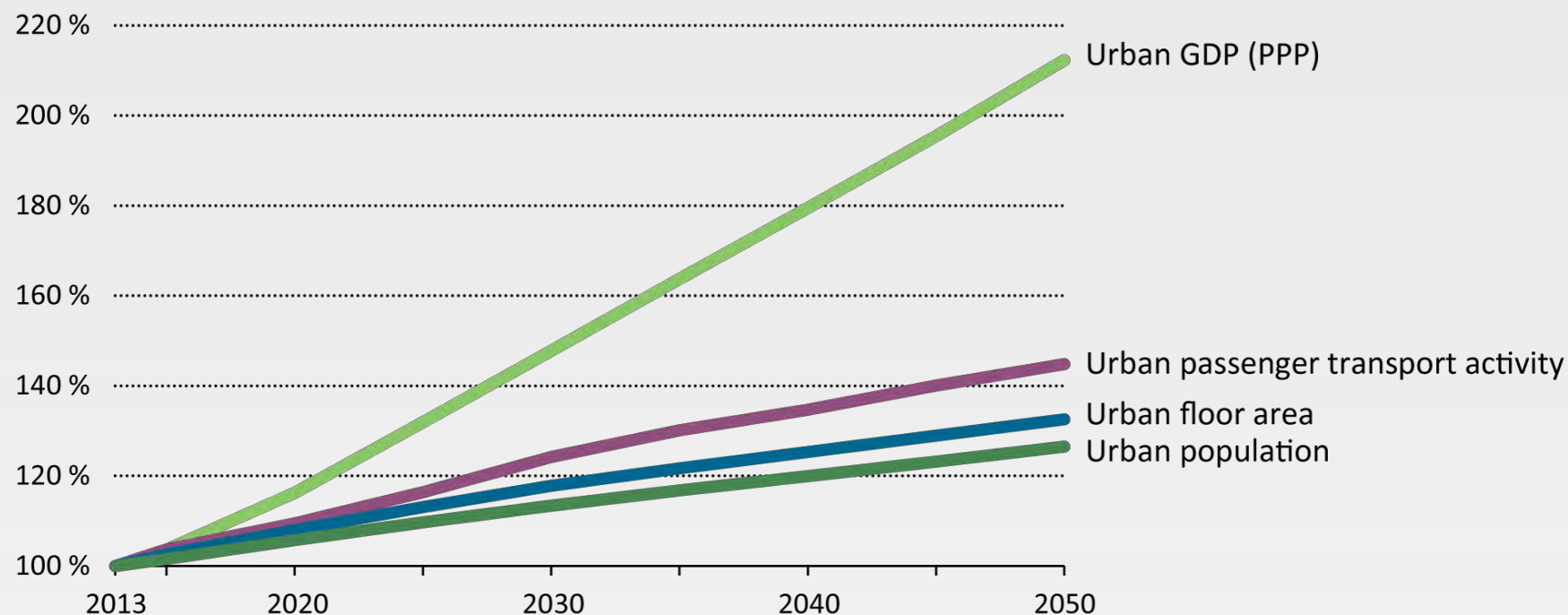
Nordic GDP, energy demand and CO₂ emissions (indexed)



Existing and planned grid interconnections in 2030

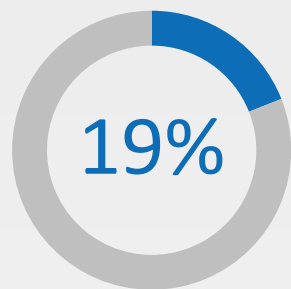


Key drivers in Nordic urban areas

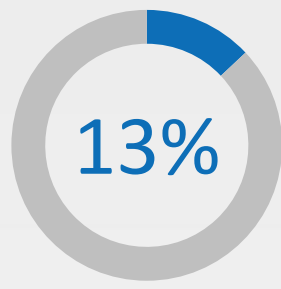


Industrial CO₂ emissions, 2013

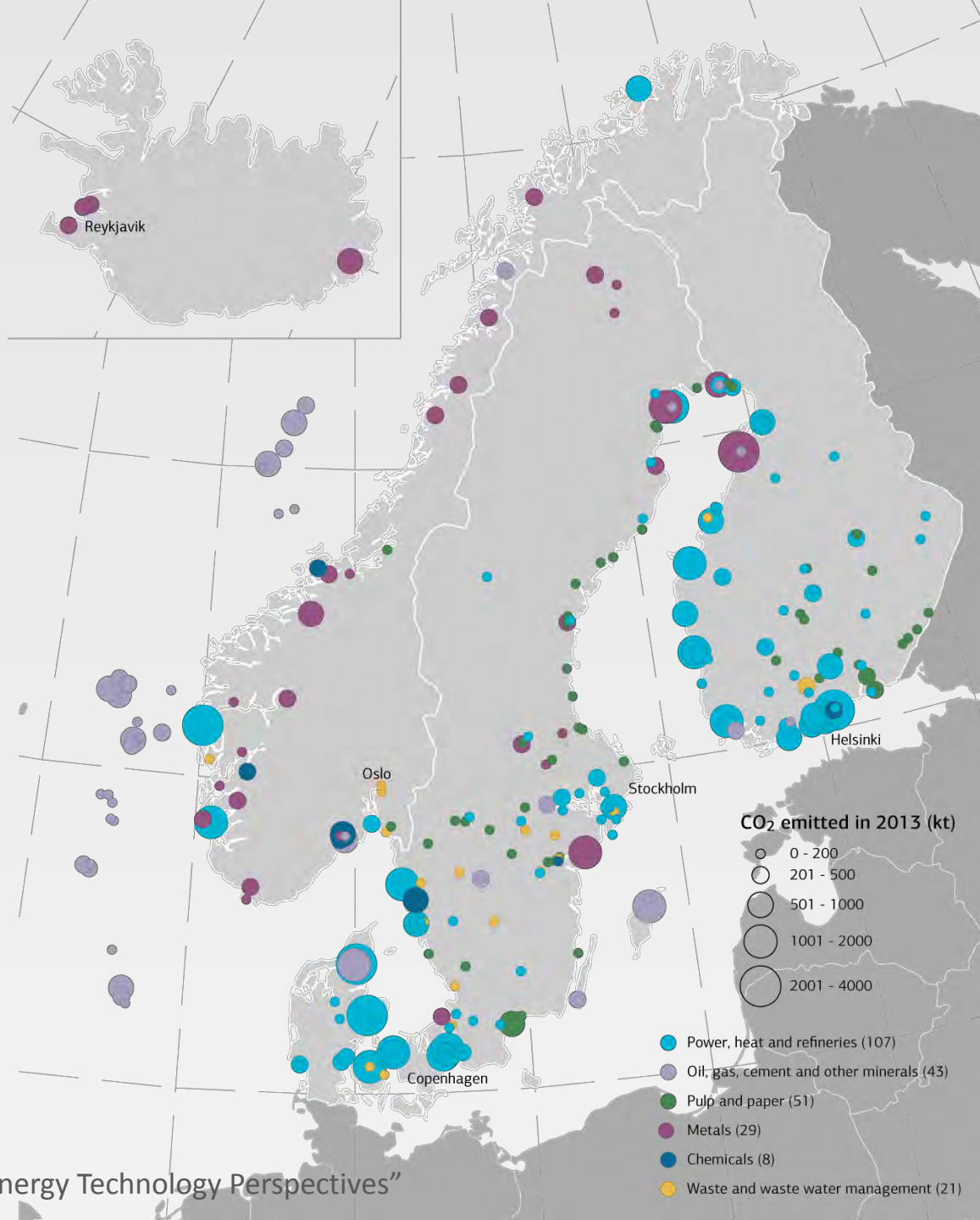
Process emissions as a share of industrial CO₂ emissions



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Source: IEA/NER 2016 (forthcoming), "Nordic Energy Technology Perspectives"



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Thank you for your attention

More information at: www.nordicenergy.org