

The EU Green Deal and Mediterranean Energy Market Integration

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**ATA Insight Webinar
The Opportunity for Clean Energy Trade Across the Mediterranean
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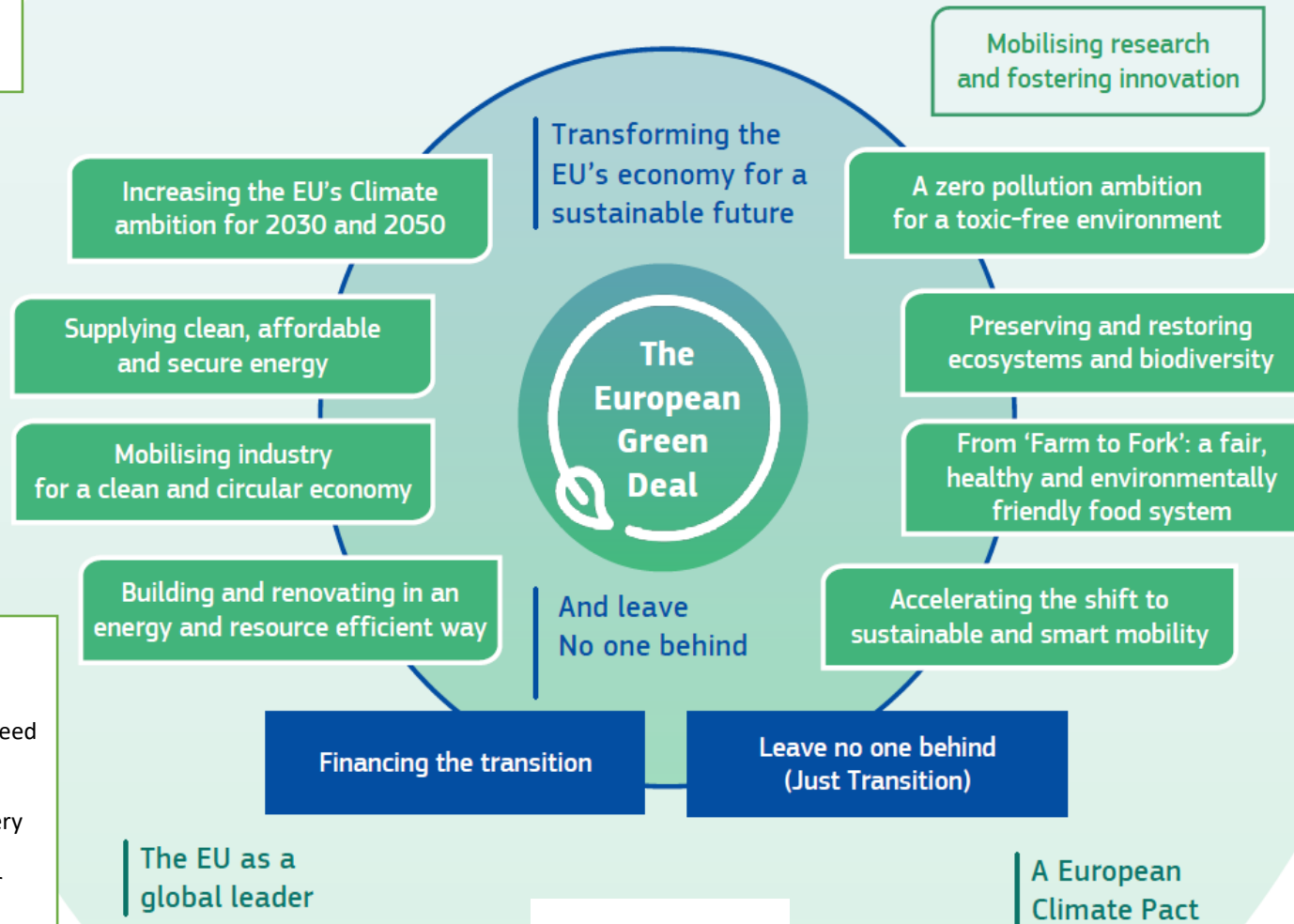
Green Deal is Europe's new Marshall Plan to deal with the COVID19 crisis

"It is crucial that we fully align our external action with our domestic climate ambition. Therefore I will fully support the development of a green agenda for the Western Balkans and place greater emphasis on cooperation with ... our Southern Neighborhood" Commissioner Simon, ITRE Committee, Feb. 2020

"The Green Deal ... should be an opportunity to re-engage with key EU neighbors, to kick-start their own energy transition and avoid that destabilizing carbon walls get erected....The new strategy...should prepare for possible imports of low carbon electricity and decarbonized hydrogen/ammonia from North Africa for example" Marc-Antoine Eyl-Mazzege, IFRI

"We call on the Commission to use the European Green Deal as a framework to shape the EU's upcoming recovery plan and thereby to keep momentum by implementing its initiatives. We need to scale up investments, notably in the fields of sustainable mobility, renewable energy, building renovations, research and innovation, the recovery of biodiversity and the circular economy," Environment/Climate Ministers from 10 Member States.

The European Green Deal



"At the core of [the Green Deal] will be an industrial strategy that enables our businesses ...to innovate and to develop new technologies while creating new markets. We will be global standard setters. This is our competitive advantage" Commission President Ursula von der Leyen

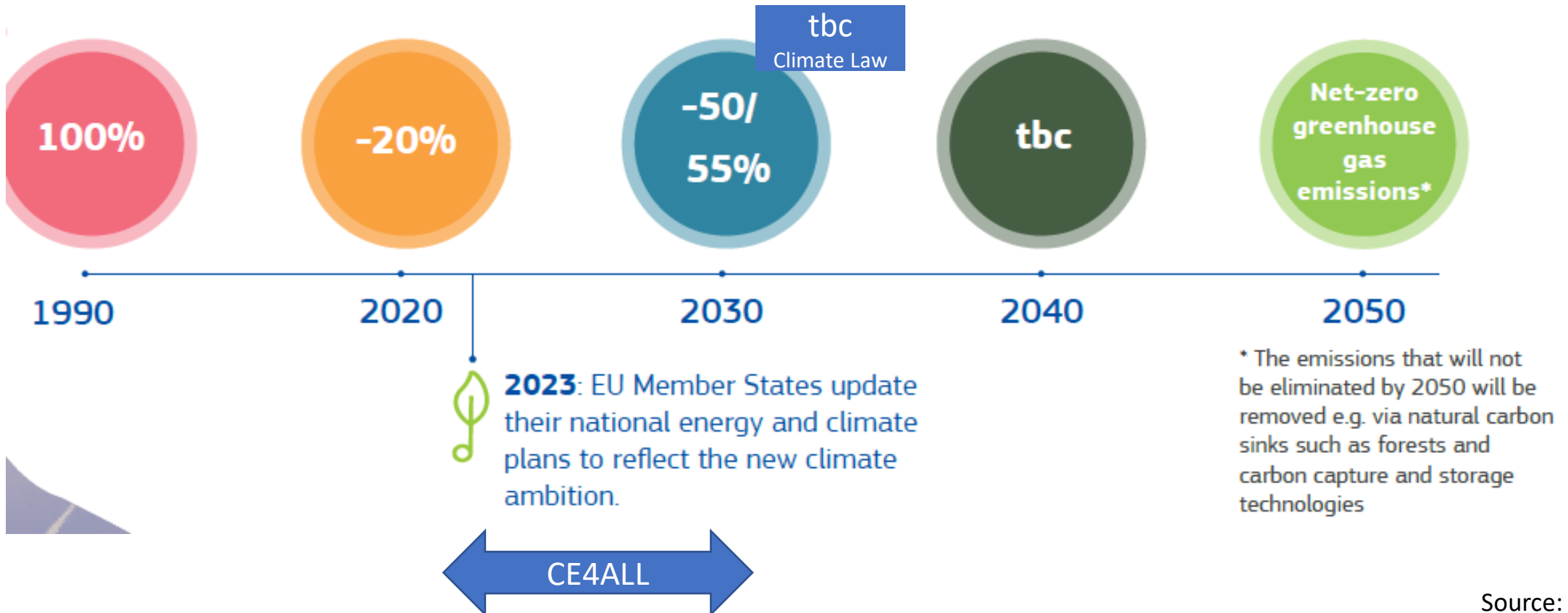
"The European Green Deal is the most important endeavour since the creation of the Single Market. We believe that a narrative articulating climate, innovation and social justice can help make the Green Deal a European success" Thomas Pellerin-Carlin and Jean-Arnold Vinois, Jacques Delors Institute

"The Covid-19 crisis did not make the climate crisis disappear ... If we relaunch the economy in the wrong direction, we will hit the climate crisis wall." French MEP Pascal Canfin, Chair of the European Parliament's committee on environment and public health, who launched the European Alliance for Green Recovery.

Source: EC

The European Commission will make proposals to increase the EU's climate ambition for 2030.

Relevant energy legislation will be reviewed and where necessary revised by June 2021. EU Member States will then update their national energy and climate plans in 2023, to reflect the new climate ambition.

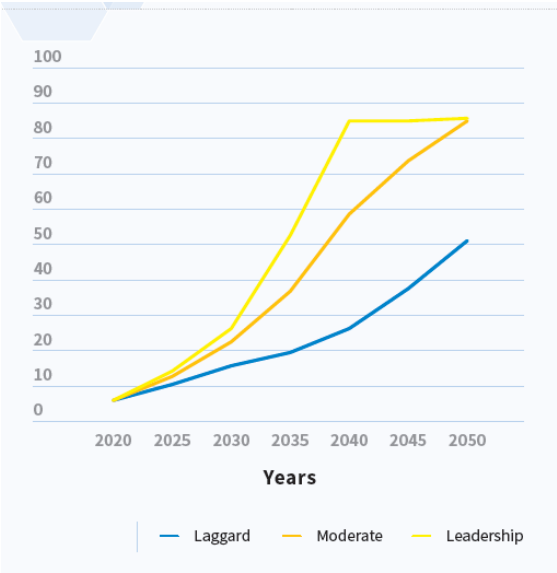
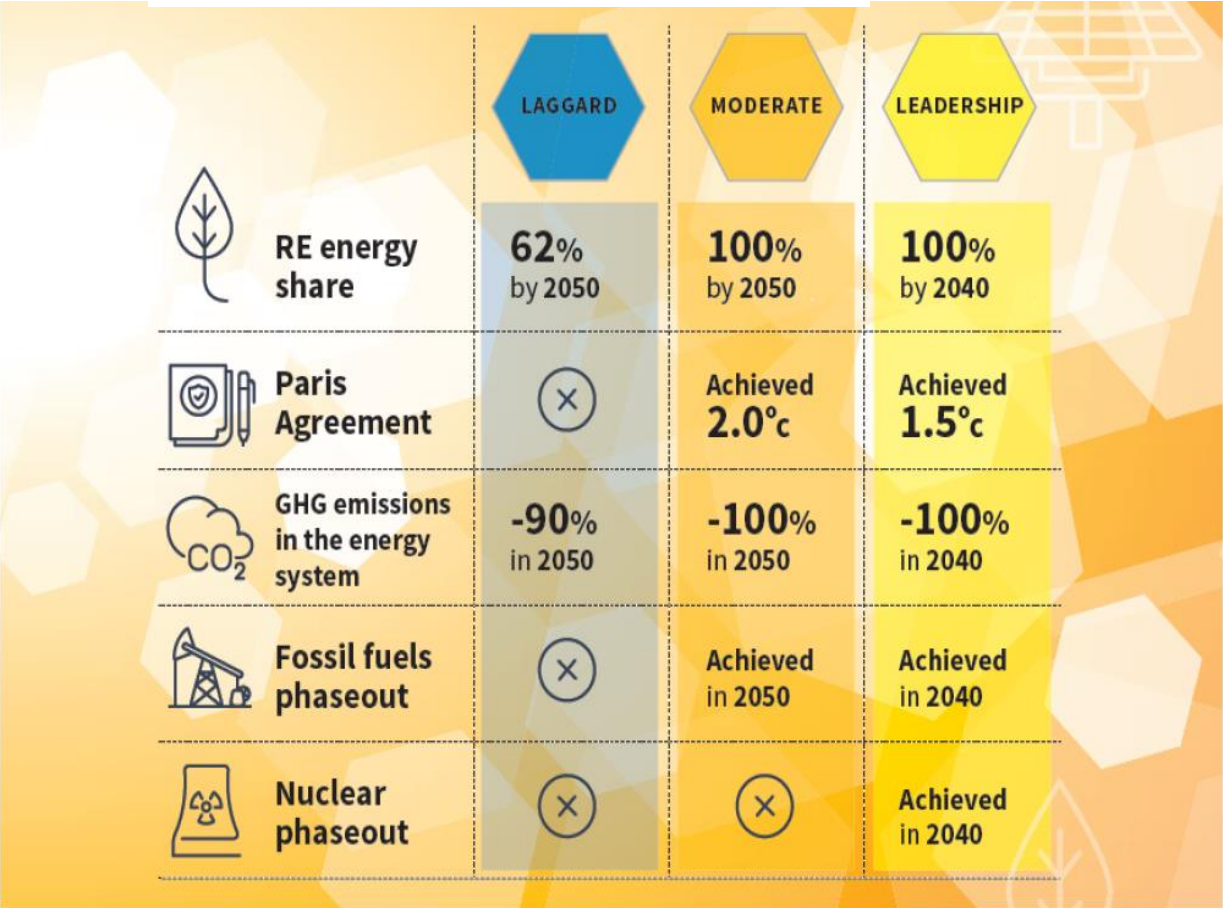


Source: EC

Decarbonisation requires massive RES scale-up and intense electrification (direct and indirect)

COVID19 accelerates digitalization and electrification, pinpoints the criticality of security of electricity supply

SolarPowerEurope Scenarios



Electricity Share



RES in power generation

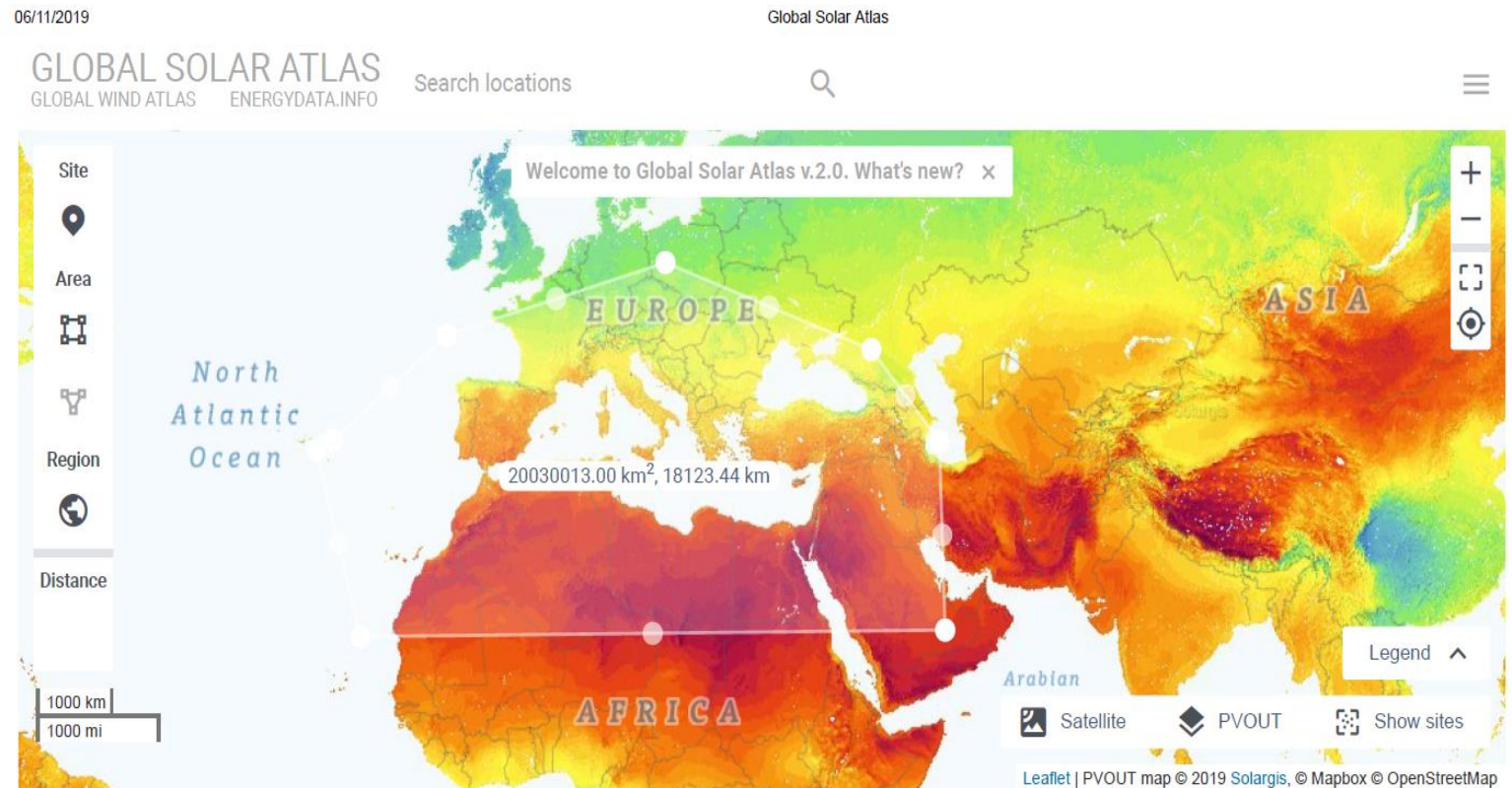
Source: SolarPowerEurope and LUT University-- See Annex for other data

Why is the Green Deal important for the Mediterranean

Countries of the southern and eastern Mediterranean shores are rich in carbon-free energy resources and creating an integrated Euro-Mediterranean market would increase power system flexibility, thus supporting renewable energy scale-up

Key highlights of EU Green Deal are the need to increase cross-border and regional cooperation, to better share clean energy sources, and to interconnect energy systems.

CE4ALL, the legislative package to implement the EU energy and climate policy over 2021-2030, and other relevant legislation will be reviewed. CE4ALL includes many cooperation mechanisms, also with third countries*



In the next software update, here the stats will be shown for the selected area

* More information in report « Clean Energy for All Europeans » Package: Implications and Opportunities for the Mediterranean.

Mediterranean energy market integration requires infrastructure... ... and more

- Electricity interconnectors

- Morocco-Spain already connected
- Turkey connected to Greece and Bulgaria
- Several projects, but slow moving:
 - Tunisia-Italy (ELMED PIC, TuNur)
 - Algeria-Spain and Algeria-Italy
 - Israel-Cyprus-Crete (PIC)
 - Egypt-Cyprus-Crete



- Gas transport infrastructure underutilised, could be used for hydrogen (or mix)

- MEG low utilisation rate
- Medgaz empty
- Trans-Med declining use trend to persist
- Average utilisation of LNG terminals < 25%



- More

- Sector Coupling, optimize across energy forms
- Some harmonization of market design and convergence in market operations
- Cooperation between national TSOs (and between gas and electricity SO) and National Regulatory Authorities

... in summary, think whole energy system and regionally/globally

In conclusion....

- ❑ COVID is definitely a threat to our well-being and our economies. However, some of its effects may be beneficiary and may outlive the duration of the epidemic, such as working habits and other behaviours that will have long lasting structural effects on energy consumption
- ❑ In particular some of the structural effects will lead to an acceleration of the electrification and digitalization trends, contributing to the decarbonisation of energy systems
- ❑ If the Green Deal is used to stir the recovery toward a sustainable path, compatible with the Paris Agreement objectives, then this might present an opportunity to support one of the key innovation to make decarbonisation possible by 2050, hydrogen.
- ❑ And the Mediterranean is likely to be the best area where this innovation can be tested. It has the resources and the infrastructure. Moreover the Green Deal calls for stronger cooperation with southern neighbours. Success would result in increased **Mediterranean energy market integration, and unimpeded trade of clean energy in the region**

Thank you for your attention

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Back-up Slides

CE4ALL-THE LEGAL/REGULATORY FRAMEWORK FOR EU CLIMATE AND ENERGY POLICY 2021-2030

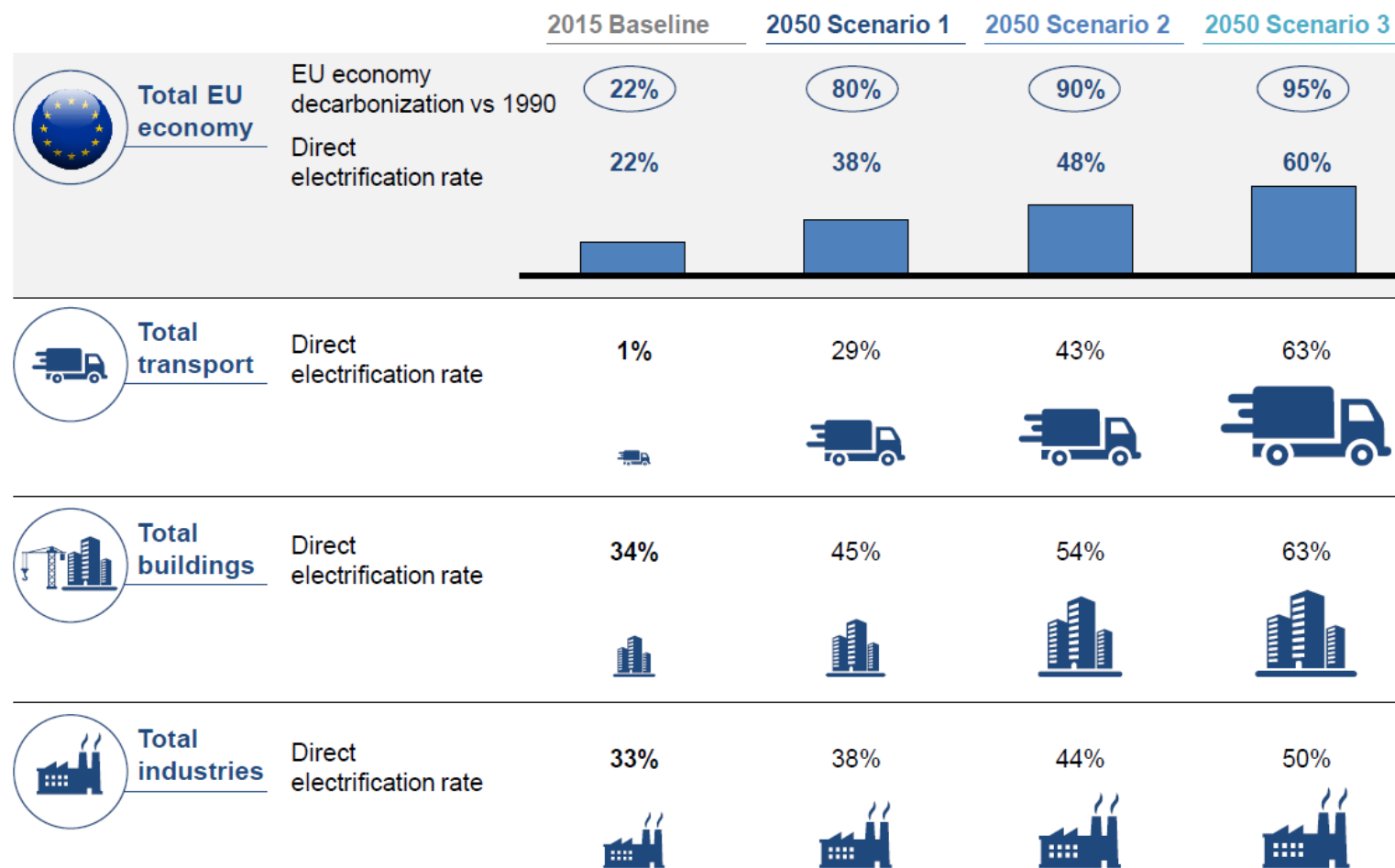
- 8 legislative documents, covering energy performance in buildings, energy efficiency, renewable energy, electricity market design, security of supply and the governance structure of the Energy Union
- A Gas Package in preparation?
- A single RE target at EU level. Strong emphasis on market integration, regional cooperation and coordination-- to reduce the cost of the energy transition and enhance security of supply– and an increased target for interconnectivity between MS
- Many cooperation mechanisms, between MS but also with third countries

Table 1 Adoption and Publication of the Clean Energy for all Europeans Package (1 July 2019).				
	European Commission Proposal	European Parliament Adoption	Council Adoption	Official Journal Publication
Energy Performance in Buildings	30/11/2016	17/04/2018	14/05/2018	19/06/2018 - Directive (EU) 2018/844 https://bit.ly/2TVFS2T
Renewable Energy	30/11/2016	13/11/2018	04/12/2018	21/12/2018 - Directive (EU) 2018/2001 https://bit.ly/2CuqQuz
Energy Efficiency	30/11/2016	13/11/2018	04/12/2018	21/12/2018 - Directive (EU) 2018/2002 https://bit.ly/2QI5HpD
Governance	30/11/2016	13/11/2018	04/12/2018	21/12/2018 - Regulation (EU) 2018/1999 https://bit.ly/2EJDzB
Electricity Regulation	30/11/2016	26/03/2019	22/05/2019	14/06/2019 – Regulation (EU) 2019/943 https://bit.ly/2LHgs83
Electricity Directive	30/11/2016	26/03/2019	22/05/2019	14/06/2019 – Directive (EU) 2019/944 https://bit.ly/2Lmk3sA
Risk Preparedness	30/11/2016	26/03/2019	22/05/2019	14/06/2019 – Regulation (EU) 2019/941 https://bit.ly/2Xof15o
Acer	30/11/2016	26/03/2019	22/05/2019	14/06/2019 – Regulation (EU) 2019/942 https://bit.ly/2Gcx112

More information in report « Clean Energy for All Europeans »
Package: Implications and Opportunities for the Mediterranean.

Available on www.cmimarseille.org

Direct electrification results by scenario



2015 – Baseline

2050 scenarios

Scenario 1

Scenario 2

Scenario 3



**EU economy
decarbonization
achieved vs. 1990^{1,2}**



**Direct electrification
rate**



**Indirect electrification
rate**

~22%

~22%

~0%

~80%

~38%

~4%

~90%

~48%

~5%

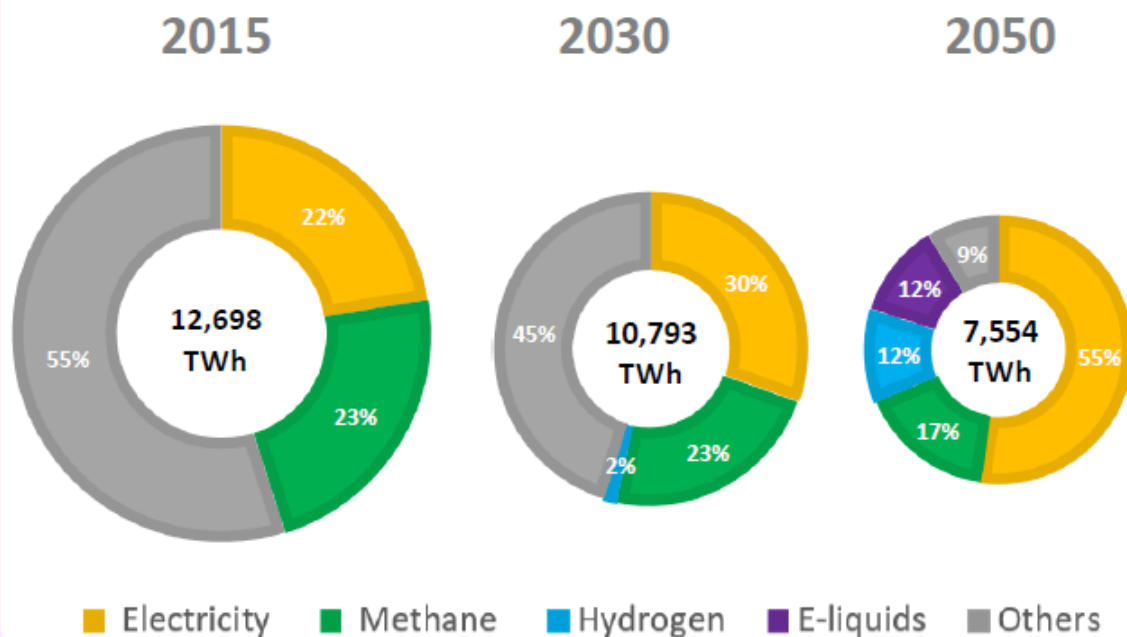
~95%

~60%

~5%

The role of electrification

Distributed Energy



Evolution of direct demand electrification

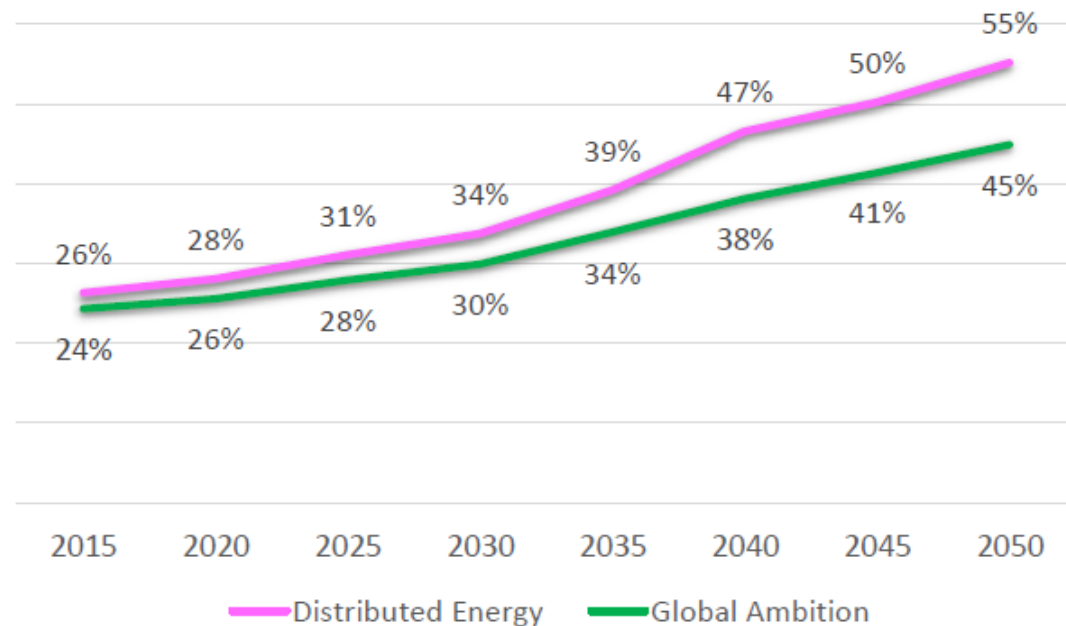
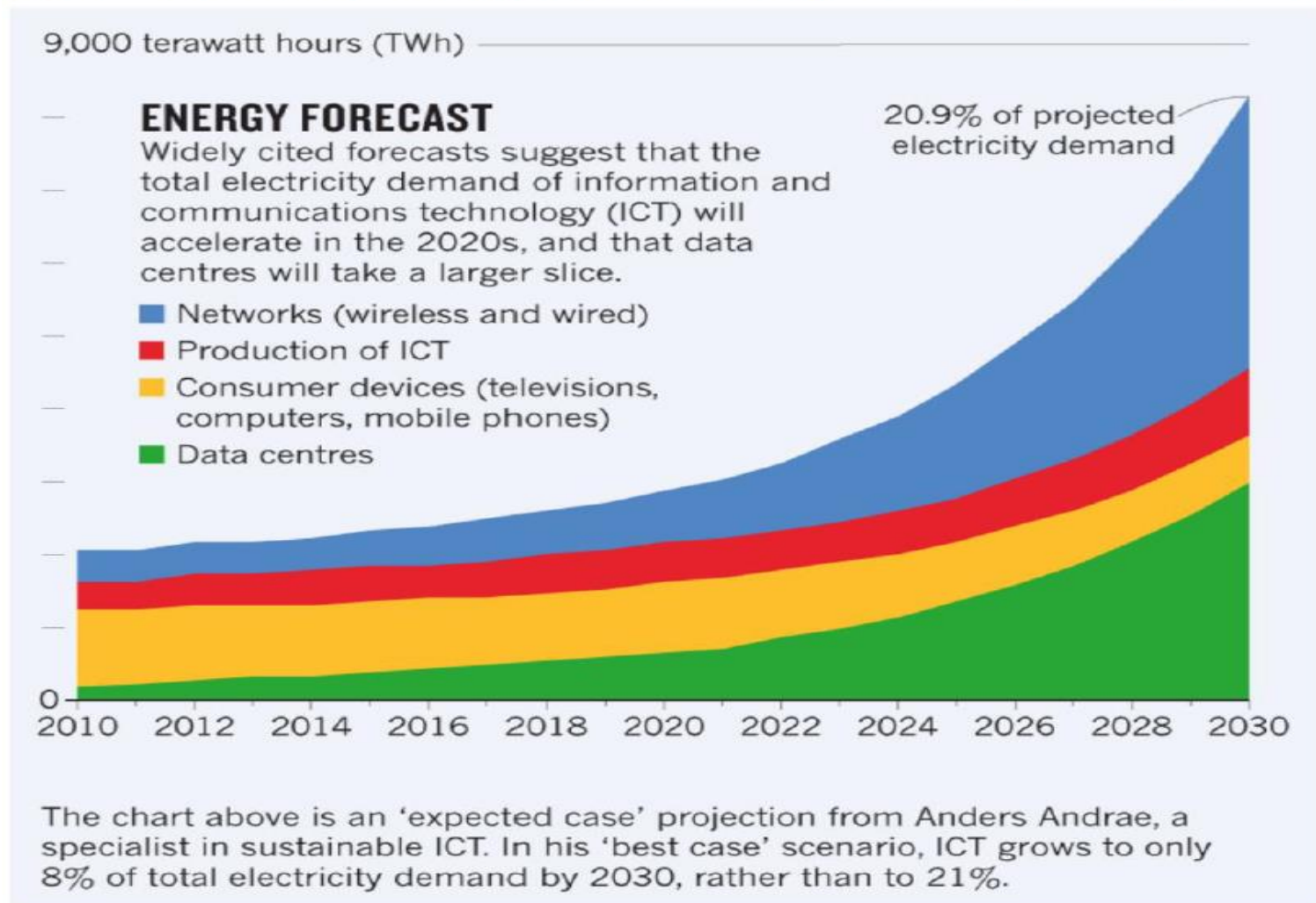


Figure 1: Forecast Growth in Electricity Consumption by ICT Sector



Source: Nature.com.

POWER SYSTEM FLEXIBILITY

Numerous definitions but flexibility can generally be defined as the ability of the power system to cope with sudden and unexpected changes in demand/supply

**Dispatchable
power plants**

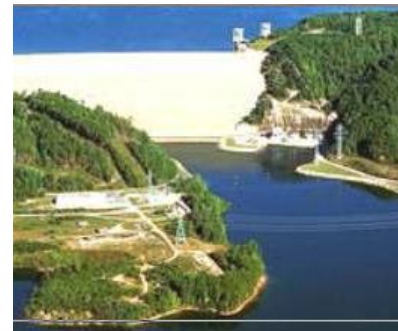


Gas-fired
power plant

**Demand side
Response**



**Energy storage
facilities**

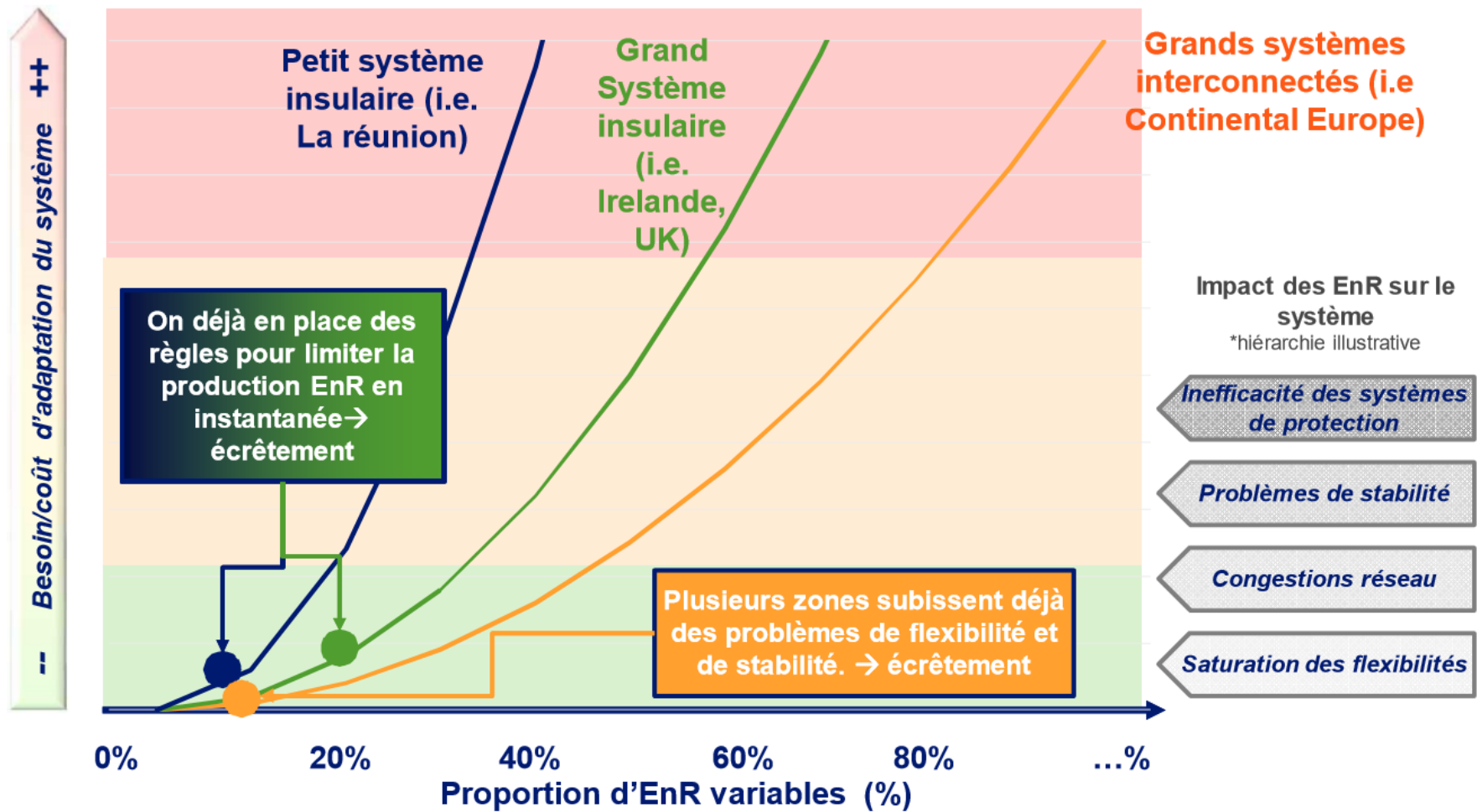


Pumped hydro
facility

**Interconnection
with adjacent
markets**



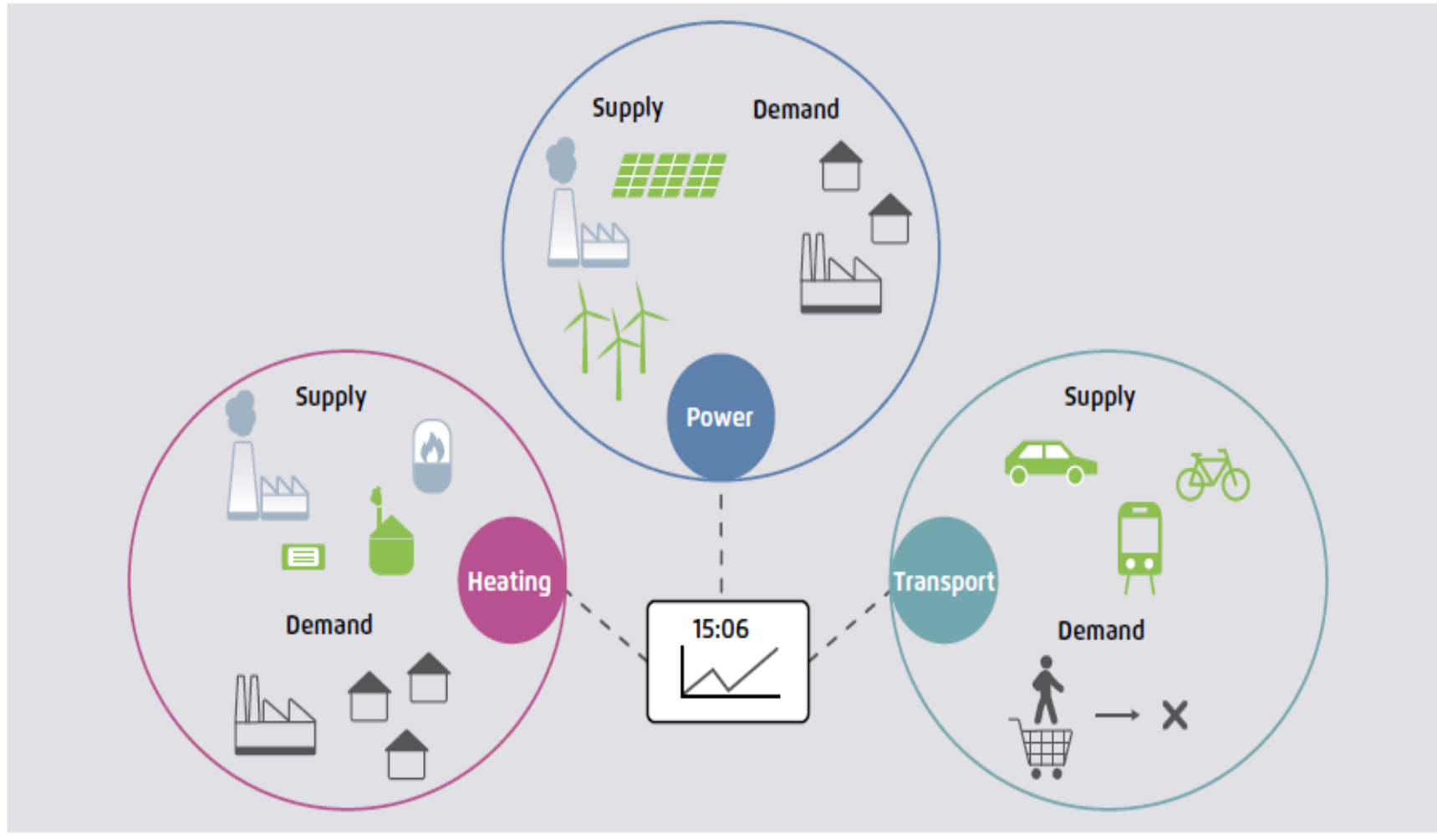
Scandinavian
interconnections



Sector coupling, also a source of flexibility (DSR, storage)

- Concept initiated with the coupling of the transport sector with the power sector: use electric vehicles (EV) as batteries and let power flow from EV to the grid (V2G)– since cars are parked 95% of the time
- Massive electrification of end-use sectors create new loads high in capacity but low in energy, if not properly managed. But if end-use sectors are coupled with each other and with power sector, DSR potential and storage solutions are increased
- Coupling electricity and gas (incl green gas and hydrogen) sectors is also a source of flexibility

Sector coupling



Power-to-Gas – Gas-to-Power

