How can spectrum policy support the energy efficiency of TV delivery?

ESMC 2023 session 9
Spectrum policy and fight against the climate change

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TV Viewing is a massive usage in Europe

- TV viewing #3h36min/day/pop in 2021
  - about the same as in 2011
  - 88% is live viewing
- SVOD (film and series streaming platforms) – usage #0.5 to 1h/day/pop
- Attributable energy consumption for three delivery platforms (DTT, IPTV and OTT) = 20,600 GWh in 2020 in EU+UK (excluding TV sets).

Sources: European AudioVisual Observatory Yearbook 2022, EBU Audience trends 2022, LOCAT study www.thelocatproject.org

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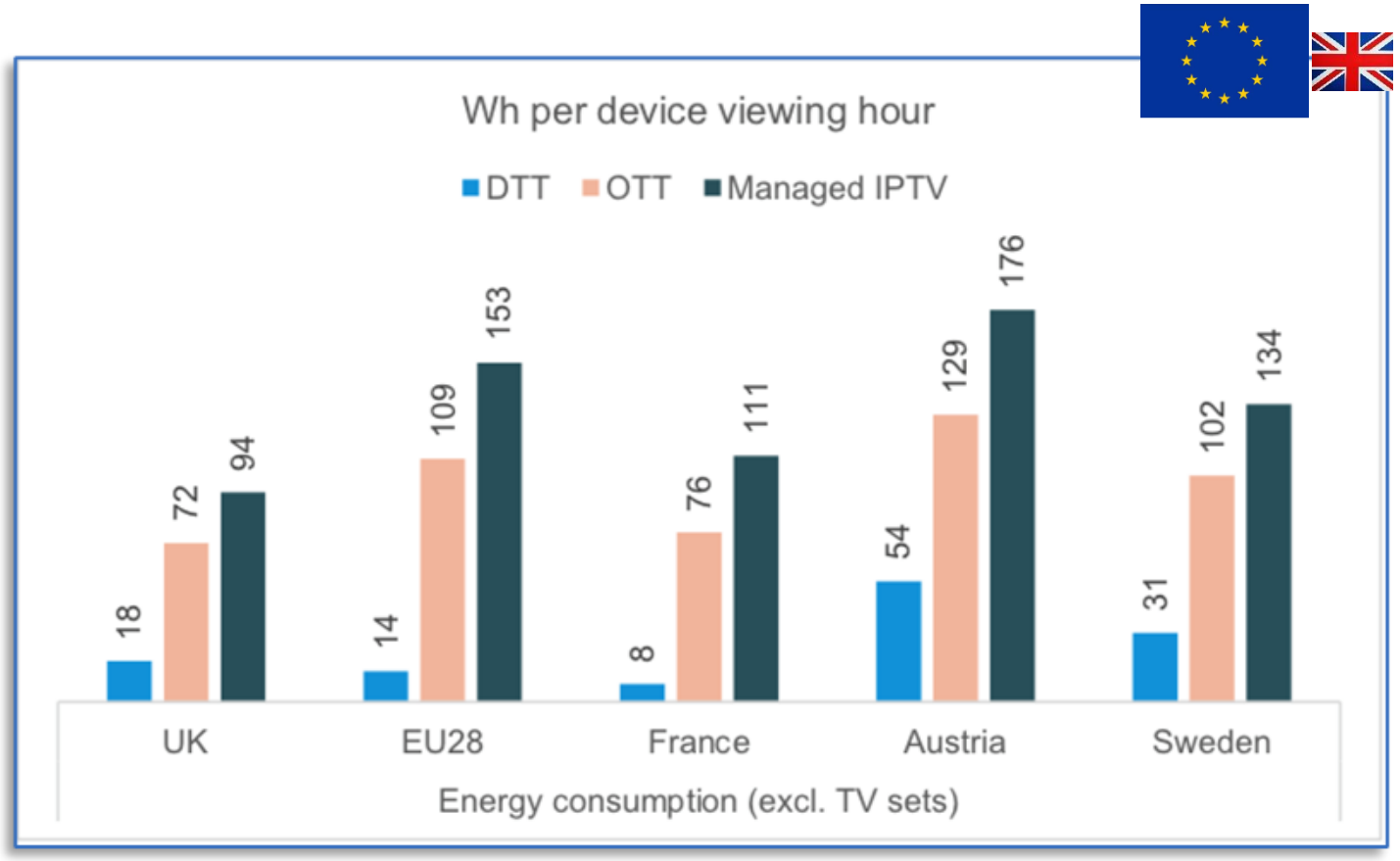
Digital Terrestrial Television is an energy saving platform for TV delivery

- The LOCAT study compared three modes of delivery (Terrestrial TV, internet streaming in OTT and Managed IPTV)
  - Carried out by Carnstone with academic support from Bristol University
  - Country per country and on average EU + UK
  - Study nominated for NAB sustainability awards 2023
- Today, delivery by DTT needs 8 times less energy per device viewing hour than OTT and 11 times less than IPTV
  - On average in Europe and UK
  - With variations across countries, due to differences in TV and internet usage and platform penetrations
- Future scenarios with the highest usage of DTT will show lowest aggregate energy usage and CO2 emissions
  - Scenarios for the future (15 year window) take account of viewing trends, and factor-in a major improvement curve for internet delivery



Source: www.thelocatproject.org september 2021

LoCaT
The Low Carbon TV delivery Project

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With enough spectrum allocated to terrestrial broadcasting, consumers can watch TV in a more responsible manner

- DTT is a modern and environmentally friendly way to enjoy television, present in 42% European households. It relies on the 470-694 MHz band.
- Hybrid TV now combines DTT for linear viewing and internet for on-demand video, for optimal and energy-sober user experience.
- In the future: introduction of 5G Broadcast technology can also serve a different set of devices and users over the same digital TV antenna, and reduce the ever-growing video streaming load on broadband networks.

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What is at stake for public authorities

- DTT is an energy saving platform -> a strong DTT is a great asset for the European Digital Infrastructure and for the European audiovisual sector in order to reach the Green Deal Targets.
- Broadcasters present on DTT reach the widest audience -> leveraging effect to raise awareness, change attitudes and prompt action regarding climate and the environment
- **Spectrum policy can play a very important role in order to fight climate change by comforting the long term allocation of spectrum to terrestrial broadcasting.**

Find out more on BNE website

- *Focus/Climate Change*
- *LOCAT study report*
- *"Building the Future of Europe – the value and contribution of the Digital terrestrial Television" by South 180 section "a sustainable Europe" p. 48-54*

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BNE represents 19 Terrestrial Network Operators active in 20 Countries

arqiva *UK*	cellnex *Spain*	CRA ČESKÉ RADIOKOMUNIKACE *Czech Republic*	Digea *Greece*	
DIGITA *Finland*	emitel *Poland*	ETB *Serbia*	EI TOWERS *Italy*	
GRUPPO MEDIASET ELETTRONICA INDUSTRIALE TELECOMMUNICATION TECHNOLOGY *Italy*	MEDIA BROADCAST *Germany*	OIV Digital signals and networks *Croatia*	ors group *Austria*	swisscom *Switzerland*
2rn *Ireland*	SOCIETATEA NAȚIONALĂ DE RADIOCOMUNICAȚII S.A. RADIOCOM *Romania*	telenor *Norway, Belgium*	tdf *France, Estonia*	TERACOM *Sweden*	TOWERCOM *Slovakia*

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