Energy, Tourism & COVID 19

An analysis of energy consumption trends in EU islands during the pandemic

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Purpose

• To provide independent, evidence-based knowledge and science, supporting EU policies to positively impact society.

Facts

• Headquarters in Brussels and research facilities located in 5 Member States

• 2,800 staff, EUR 460 million annual budget, > 50 large scale research facilities
Importance of Tourism in EU economies

- Approximately 2.3 million businesses in the sector
- Accounts for 5.1% of the labour force
- Increasing carbon footprint of tourism
Policy relevance

Green & sustainable tourism is part of the EU Green Deal commitments

Clean energy transition of the more than 2,200 inhabited European islands is a goal of the 'Clean energy for all Europeans' package
JRC Report

Analysing electricity consumption patterns and tourism during the pandemic shock, investigating the real impact of touristic activities in terms of energy demand:

• A literature review that connects tourism and energy consumption, focusing on the electricity sector

• A detailed case study analysis on 9 EU islands
Case studies

- 9 Islands or island groups
- 6 EU Member States
  - Cyprus, Denmark,
  - Greece, Italy,
  - Portugal, Spain
- 3 Marine regions
The case of Balearic Islands (ES)

Impact of Covid on mobility & Stringency Index

Predicted electricity consumption & actual consumption
The case of Balearic Islands (ES)

Arrivals & electricity consumption 2016-2021

Arrivals, electricity & stringency index consumption 2020-2021
Tourism contribution to GDP and decrease in electricity demand
Average annual consumption and overnight stays by GDP contribution of tourism

By GDP contribution of tourism

Overnight Stays 2019

Average annual consumption 2016-2019 (MWh)
Achieving islands energy autonomy and climate targets with a community paradigm

Integrated analysis of RE potential in islands

Socioeconomic analysis
Assessment of electrical energy system
Analysis of policies and regulations
A survey tool on community involvement
Forecasted status of electric system
Design of RES projects scenarios to achieve targets etc.
Identification of narratives, biases, barriers and support frameworks

Source: Community Energy Transition in the Ionian Islands, an analysis and scenario roadmap for Corfu and Zakynthos
Corfu case study

Electricity cost per sector in Corfu
€ 62.7 M, in 2019 prices

Sectoral breakdown:

- Residential 23.6
- Industrial 1.1
- Commercial 34.2
- Agricultural 0.84
- Other 1.1
- Public 2.5

RES deployment Scenario X

Demand Forecast
633,600 MWh

RES coverage 64% (2030)
405,504 MWh PV: 65% W: 35%

Total Installation Costs
208,260,000

Total required area
2.05 km2

Potential citizen investment capital for RES projects through Energy Communities
Approx. € 25 M

Source: Community Energy Transition in the Ionian Islands, an analysis and scenario roadmap for Corfu and Zakynthos
Summing-up

Our report provide **evidence of the energy intensity of the sector** and a proxy over the order of magnitude of tourism’s sector impact on local energy systems:

- Correlations between reported lockdowns, drops in electricity consumption and decrease in tourism arrivals
- Islands with a higher economic dependence on tourism experienced a greater decrease of energy use

The results can **stimulate the discussion over the energy component of local sustainable tourism plans** as the need for sustainable and circular touristic economies becomes more critical

**Note on research barriers:** Data are not always available or in a useable form at this level of spatial disaggregation

**Note to island communities stakeholders:** Community investments in RES, local grids and storage accompanied with adequate forecasting on tourist arrivals and solid governance schemes are necessary and pay off
Keep in touch & thank you

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