Envisioning a socio-technical transformation with people at the center: The experience of energy sector policy in Chile

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The Chilean energy context

- No indigenous fossil fuels, lots of renewable energy resources
- Unbundled liberalized electricity system since 1982, one of the first countries in undergoing liberalization

Currently working for developing the electricity retail market
Energy transition to renewables

Renewable electricity generation 44% 2019

Solar and wind energy development

GWh


Oil Natural gas Coal Hydro Biomass Solar Wind Geothermal
Carbon neutrality by 2050 & projections for the energy transition

Renewable electricity generation

44% 2019
70% 2030

Fuente: PELP / Análisis de Carbono Neutralidad, 2019
Digitalization-context in terms or energy

**Infrastructure**
- The use of smart meters is not massified, neither distributed generation appl.
- Started reforms on the communications and management side of the system

**Security**
- Lack of defined regulation and protocols for privacy, data sovereignty and information security

**Economic**
- Lack of economic incentives for implementation and deployment
- High investment cost

**Regulatory**
- Several applications require a modification or update of the current regulation

**Human capital**
- Lack of training and need of new skills, knowledge and digital education

**Energy sector faces the big challenge of moving towards an end-user-centric paradigm, taking advantage of the opportunities given by digitalization**
The way in which we communicate a solution is very important for policy success.

It is necessary for people to perceive the benefits of policies.
Updating process of our long-term energy policy: participation is key

- We want our *policy to be rooted on people’s needs* and address them
- **People** need to be part of the *diagnosis*, as well as on *weighting prospective solutions*
- **People** need to be part of the *implementation* of energy policies: *for policies to be appropriated it is key to integrate actors in the policy design process*
Key messages for the digitalization strategy from the participatory process

In the long-run, public policy should aim...

**On electricity systems:**

- **Empowered users:** Public policy should guarantee that all users of electricity are able to make informed decisions—as we focus on what we want in the long run, we do not choose a specific technology

- **Electricity systems:** accessible, flexible, sustainable and reliable for opening-up more interaction spaces with users

**On information:**

- Public policy should **guarantee the access of energy information** for people, public and private institutions

- Developing regulation for coordination, cooperation and security

- Continuous data collection and management processes
Digitalization: what are we doing now?

• Focusing on developing regulation for addressing **communication systems** and **information management systems** before we go back to the needed metering equipment

And when we tackle that again we want to **make sure the benefits of our policies for people are as much apparent as possible**

• **Regulation reform** for allowing for **electricity retailing** and associated services

• Our approach to help unleash distribution systems and digital applications focuses on **identifying barriers** that prevent their **adoption and deployment**

• **On information**: developing information management and communication systems at ISO level
To take a more active approach:

- Promote **articulation** between the different **institutions**
- **Increase** public **investment in digital infrastructure**, build ICT infrastructure
- **Define a common data architecture, tools, and standards** for interoperability and **raise the quality, reliability, and security** of devices and services
- **Reduce the digital gap** among the different **territories** of the country
- Policies to increase investment in **human resources and education**
- **Pilot programs** to promote the use of digital applications
- **Encourage investment** by private parties in digitization projects
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