

The Future of Energy – an Analysis by International Stakeholders

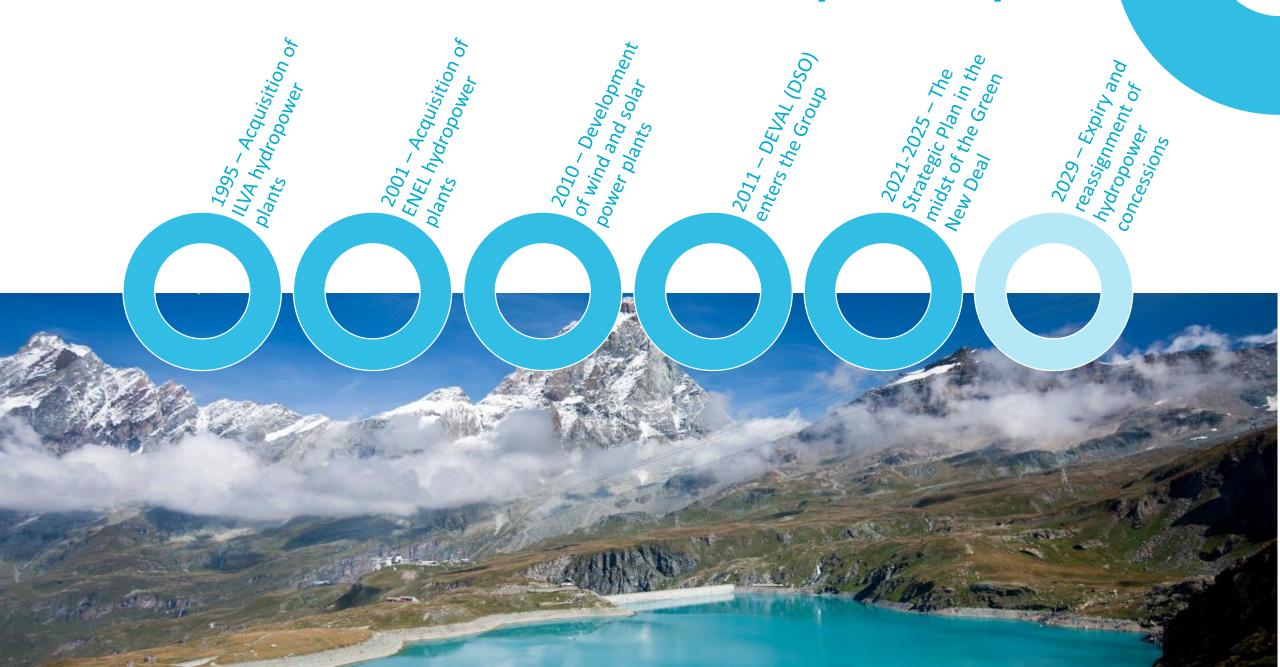
Fondazione Courmayeur Dec 12th, 2021

Agenda

- CVA Renewable ever since
- The challenge of the energy transition
- The energy transition, CVA e the Valle d'Aosta

CVA - Renewable ever since

Born renewable... and we chose to stay that way



Our sources: water, wind and the sun







CVA • The energy transition – mixed feelings

A momentous and complex change



Ursula von der Leyen 🕗 @vonderleyen · 14 lug

We can choose a better, healthier, more prosperous way of living.

Saving the climate is our generational task. It must unite & encourage us.

It is about securing the wellbeing and freedom of our children. There is no greater, nobler task.

Europe is ready to lead the way.

We are facing systemic change, with ambiguous and uncertain elements, which impact many different aspects

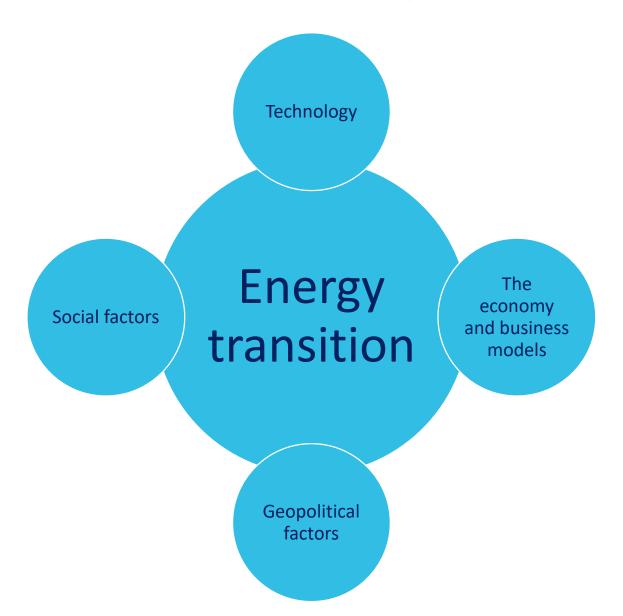


"So far, however, these implications have not been addressed in a systematic manner. Too often the transition has been pictured, if not as pathways of roses, at least as a rather benign endeavor."

"Policymakers are caught between a rock and a hard place. If too gradual in the years to come, the transition is likely to prompt precipitous adjustments later. If too swift it is bound to entail large losses resulting from the accelerated obsolescence of the existing capital stock and the limited availability of cost-reducing innovations."

Jean Pisani-Ferry, 2021

A momentous and complex change



A momentous, complex... and complicated change

The energy transition is facing a number of bottlenecks

- Policy-makers' use technical-scientific evidence (or the lack of) to define far-reaching policies
- Fluctuations in prices (driven by demand, offer, speculation and... policies)
- Unbalanced growth along the energy supply chain
- The role of private-sector actors, between Kirzner and Schumpeter
- The issue of time festina lente



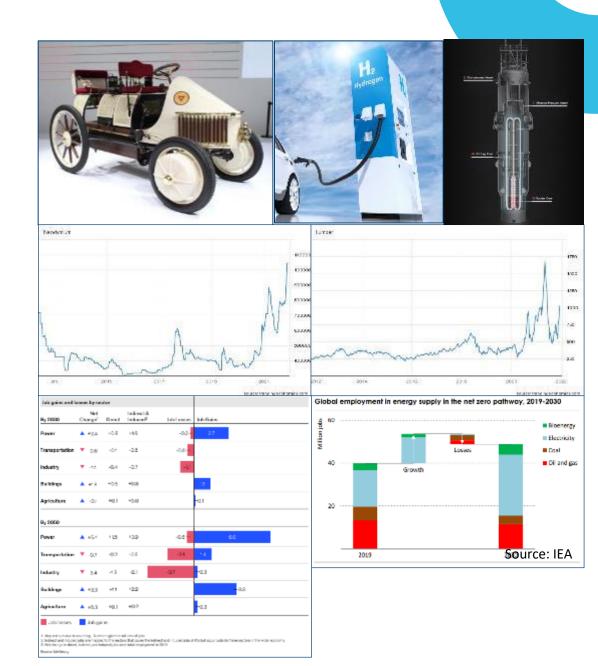
Acting faster

- 2-5 years to secure permitting in renewable energy plants (6 in Italy)
- An increasing number of legal procedures contrasting the installation of new power plants
- Italian 2030 targets amount to 7 GW new installations/yr (currently it's 0.8 GW/yr)
- The issue of **regulatory paralysis** for "new" technologies
- Technological change as a "complex innovation" requiring the emergence of new "industrial ecologies" and business models

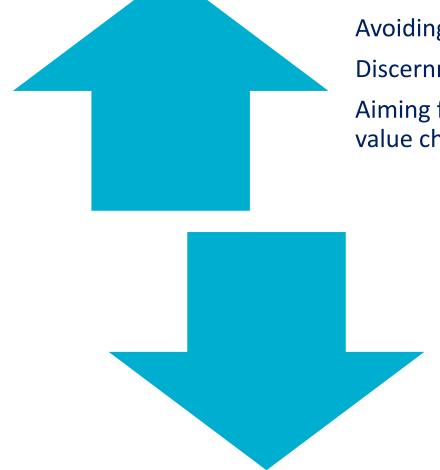


Acting slower

- The risk of technological lock-in in solutions that here and now appear to be superior to firms (excusable!) and policymakers (less so!)
- Avoiding / smoothing massive bullwhip effects driven by rashly implemented policies
- Managing industrial reconversion of supply chains and and reskilling of their workforce



How to deal with this momentous change from a local perspective



Avoiding inaction

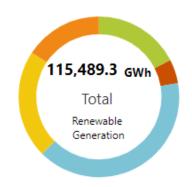
Discernment in timing

Aiming for agency and global leadership across the value chain



From: 10/12/2020 To: 10/12/2021

Last update: 10/12/2021 11:00

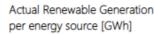


Fracturing a complex system

Mis-steps in execution

Becoming "leaders without followers"

Neglecting old-fashioned hydropower





Data from Terna

The energy transition, CVA and Valle d'Aosta



Our 2021-2025 strategic plan... and beyond



Operations and hydropower





New wind and solar power plants



- Major repowering and revamping projects in hydropower
- Retrofitting of automation systems





Energy efficiency

- Refurbishment of residential real estate (>3000 flats planned)
- Trigeneration projects in industrial facilities



Distribution

- Refurbishment of the network to increase resilience
- Upgrade of the network in view of the energy transition (capacity, smart grid, etc.)



Sales development

Increase of retail customers keen on clean energy



Open Innovation

- Green hydrogen
- Other storage technologies
- Energy communities
- Efficiency-leading technologies

A common objective

CVA and Valle d'Aosta are in a sweet spot and share the objective of becoming a "fossil fuel free" region by 2040

The need to bring together all the relevant actors, looking holistically at environmental, social and industrial transformation (NFI/ESG reporting is key, but not enough)

The need to come to terms with the rigidity of "Green" regulations and finance

- Autonomous region
- Sustainability as a deeply ingrained culture
- Small size
- Geographic position
- Foreign Direct Investment policies

Regione Autonoma Valle d'Aosta



- Renewable ever since
- Financial stability
- Size of firm and governance

CVA







