

Energy Communities and Energy Efficiency (REScoops)

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In this presentation

- About Community Energy and REScoop
- About the project (results)
- Legal analysis
- National level: an example from the Netherlands



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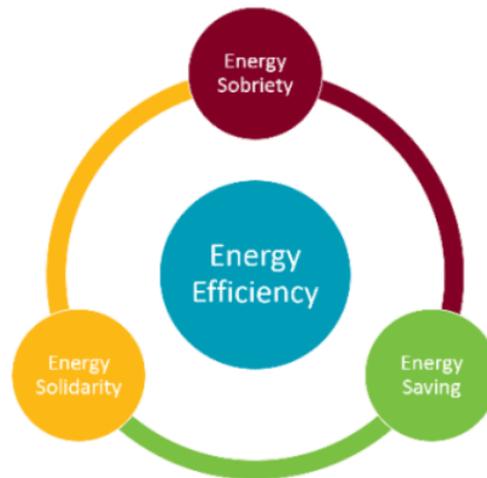


REScoop.eu: a European movement



		Germany: 800 REScoops
		Denmark: 657 REScoops
		Austria: 390 REScoops
		Netherlands: 110 REScoops
		Sweden: 108 REScoops
		Finland: 79 REScoops
		Italy: 74 REScoops
		France: 60 REScoops
		United Kingdom: 45 REScoops
		Spain: 26 REScoops
		Belgium: 22 REScoops
		Ireland: 10 REScoops
		Portugal: 6 REScoops
		Croatia: 4 REScoops
		Greece: 4 REScoops
		Luxemburg: 2 REScoops
	Total amount of REScoops in Europe: 2.397	

Community Energy : value driven



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A thesis.....

- REScoop membership leads to less energy use
 - Why and how?
 - Is it true?
 - How can we use it in a broader context?

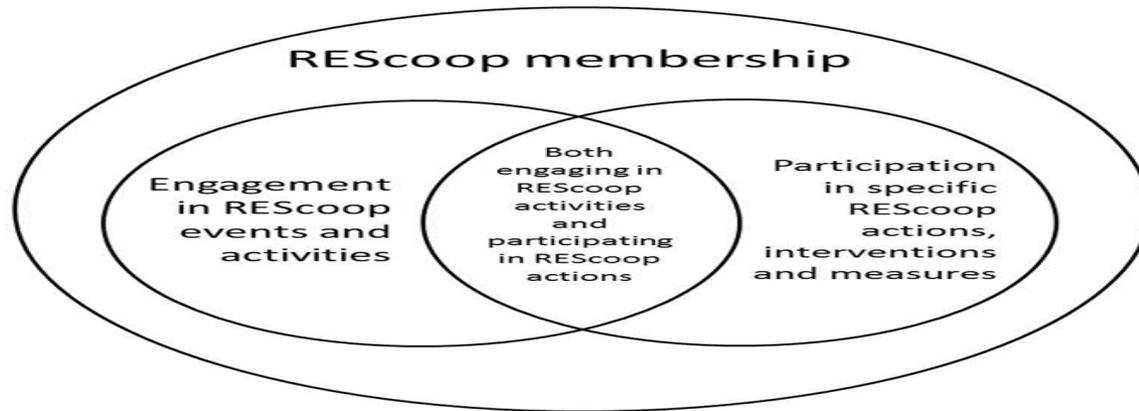


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Why and how?

- We assume REScoop members to be very motivated and willing to save energy because:
 - general REScoop membership;
 - engagement (in activities and decision making);
 - exposure to specific measures/interventions from REScoops.



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How do we know REScoop members save energy?

- Statistical Evidence of the behavior changes in REScoops based on consumption data
Theocharis Tsousos (Technical University of Crete)
- Exploring behavioral changes in energy use due to engagement in cooperatives based on survey results Frans Coenen (University of Twente)



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Statistical data analysis

(in brief) results of the analysis

→ Joining a REScoop leads to **more than 20% reductions** in energy demand

→ Becoming a **prosumer** substantially reduces REScoop members' electricity demand, **more than 45% reduction** in different energy consumption indicators

→ Subscribing to energy consumption **monitoring** and savings **software platforms** results an average decrease of about **30%** in **energy consumption**



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TECHNICAL UNIVERSITY OF CRETE (TUC)
ENVIRONMENTAL ENGINEERING DEPARTMENT
RENEWABLE AND SUSTAINABLE ENERGY
SYSTEMS LAB



REScoops and energy saving by their members

- **Research question WP3:** *‘What behavioral and social aspects influence energy savings and investment by consumers and members of the REScoop?’*
- **Main effectiveness question:** *What are the effects of REScoops on household energy savings among their members and investment in renewable energy?*
- **(a) Goal achievement**
 - undertaking (individual) energy savings actions (Energy curtailment behavior and energy efficiency behavior).
 - Lowering energy consumption
- **(b) Effectiveness (relation of actions and energy savings to contribution REScoops)**



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Research method

- Surveys
- Where?: Denmark, Belgium, France, Portugal, Spain, Italy.
- 8 Languages.
- Online.
- Six surveys in 2017 (N = 10,585).
- Seven surveys in 2018 (N = 7,556).

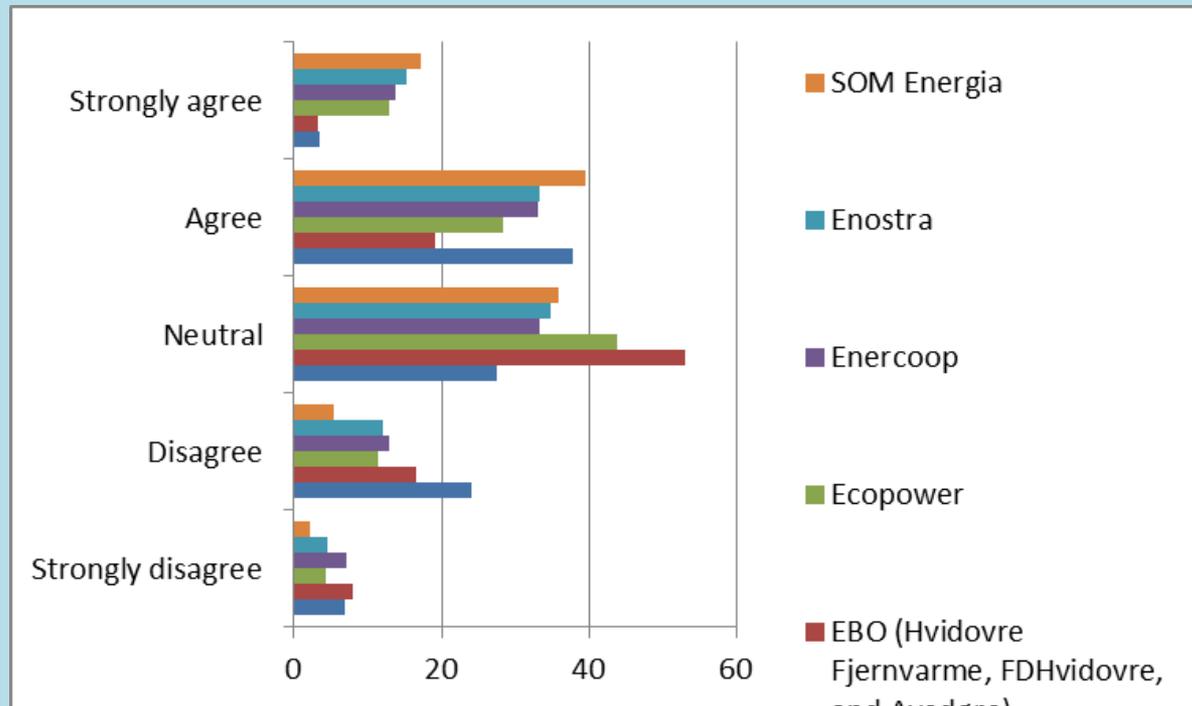


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Importance

- After having joined a REScoop energy savings have become more important to me (in %).

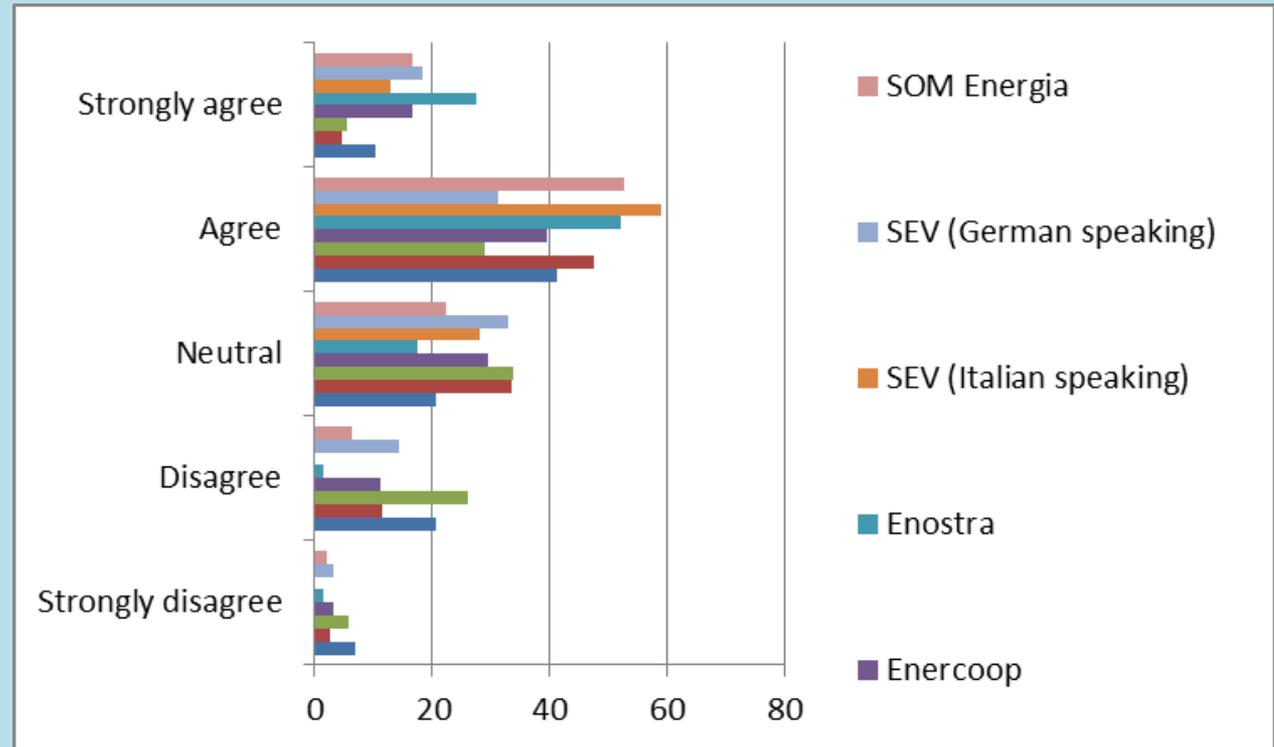


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Knowledge

- REScoop contributing to increased knowledge about renewable energy (in %).

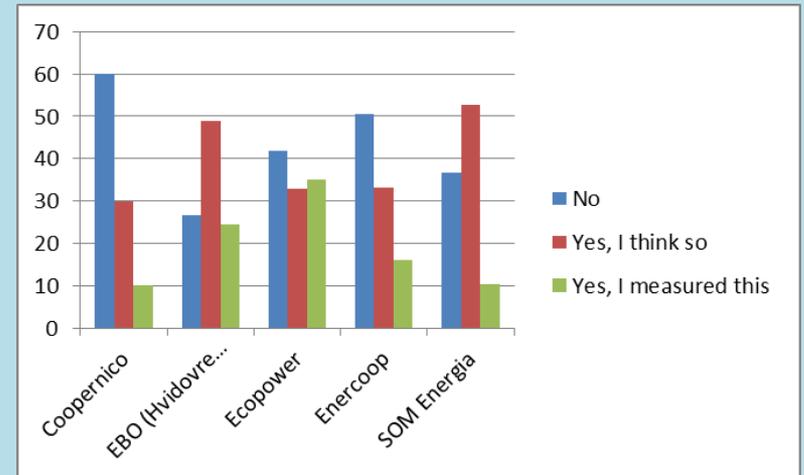
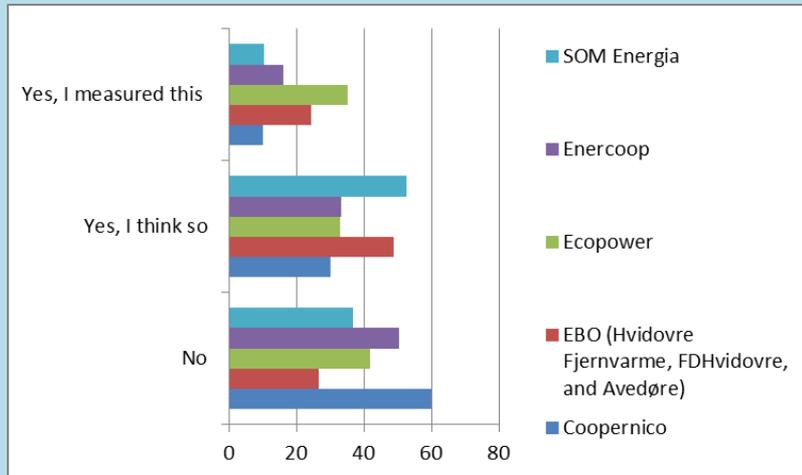


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Energy savings

Did you lower your energy consumption?

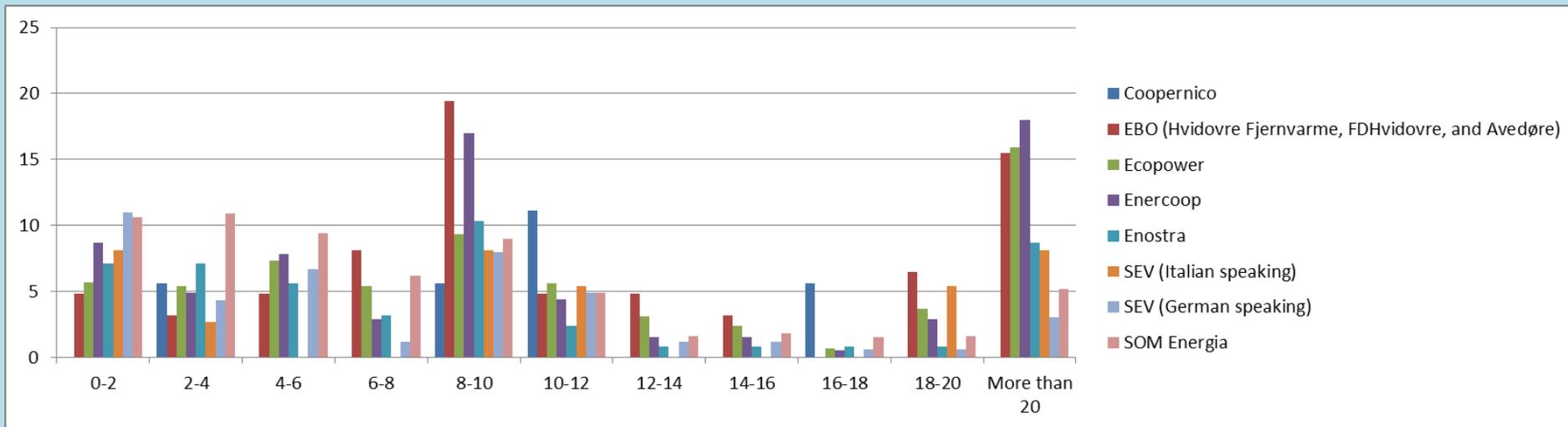


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Reported energy savings

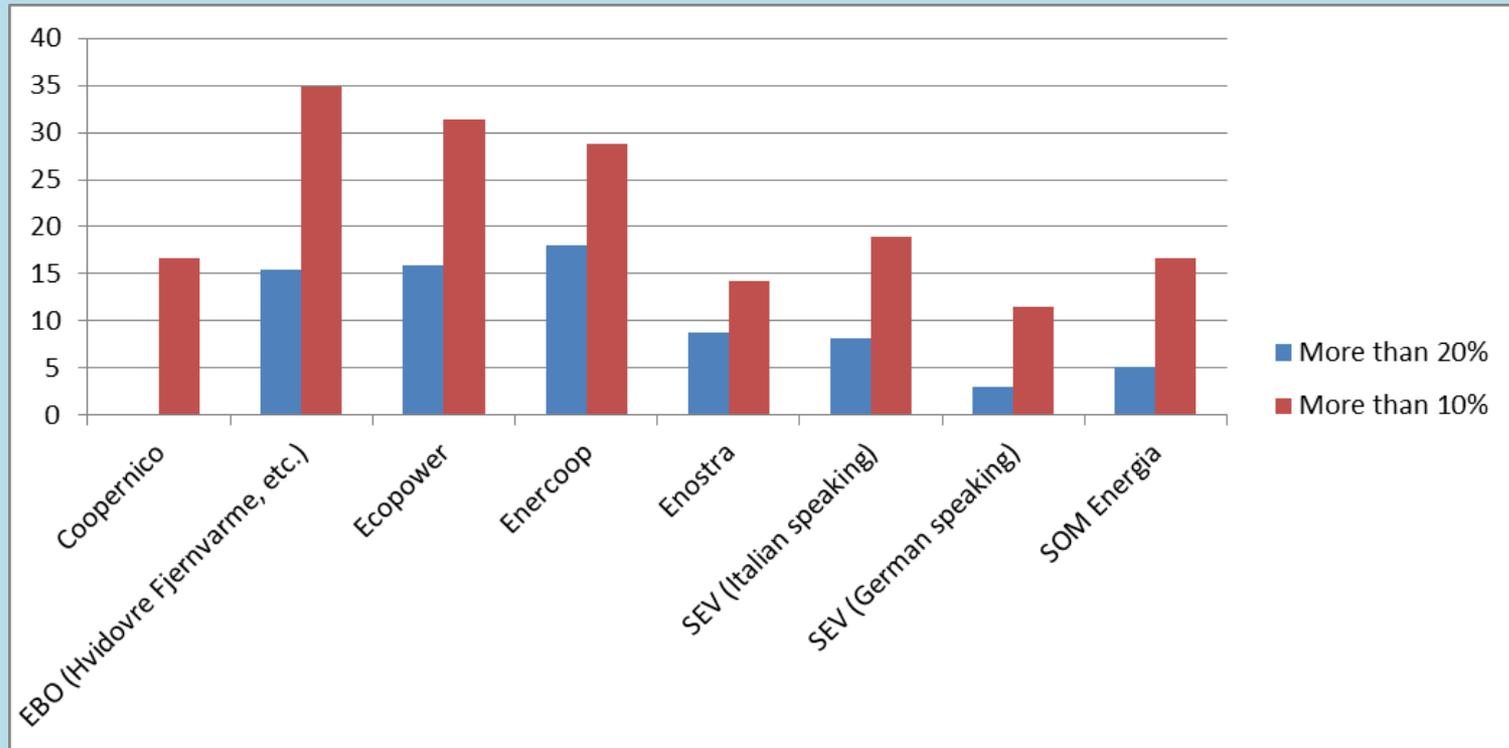
- Indicated percentage energy savings (X-axis) x percentage of sample population (Y-axis).



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Reported energy savings



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Results: Effects of REScoop membership on energy savings

- Since becoming a REScoop member:
 - energy savings have become more important to respondents.
 - a higher knowledge level on energy issues has been obtained.
 - there is a broad overall satisfaction with REScoop energy service delivery.
 - it is considered better than energy services delivered by conventional energy suppliers.
 - more (individual) energy savings actions have been undertaken.
 - 61% (2018 data) of respondents indicate less energy consumption after obtaining REScoop membership.
 - 20-53% (on average 44%) of respondents argue that REScoops have contributed to energy conservation. .



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Effects of specific REScoop measures/interventions

- In general, significantly and positively related statistically to energy savings (since becoming a REScoop member).
- General satisfaction with measures.
- However, relatively few respondents indicated to have used or to be exposed to measures.



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Conclusion

- REScoop members engage more in individual energy savings actions than non-members.
- The longer the REScoop membership the more energy savings actions, energy saving (long run), investments made and willingness to invest.
- Specific measures considered rather effective, but only moderately used (fairly low degrees of participation).
- Behavioural factors also found to statistically correlate. Some of them can be influenced by REScoop tools and measures (excluding demographics and household characteristics), and contribute to energy savings;
 - i.e. motivational factors, intention, social norms, knowledge level.



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Recommendation: mainstreaming the positive effects of membership of a REScoop

- REScoops are well placed for energy saving measures
- It is not only the effect of measures but also about engagement and membership
- The longer the membership the greater the effects
- Roll out the REScoop toolbox



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Legal analysis (recommendations)

- In their NECPs, Member States should establish high level objectives or targets for supporting community ownership of renewable energy. In doing so, Member States should also acknowledge the potential synergies between support for RECs and CECs and investments or actions that result in behavioral change around energy efficiency and building renovations.



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EED and CEC and REC's

CECs and RECs are not addressed specifically in any of the revised EED provisions. Nevertheless, the EED does contain a new requirement to take into account the need to alleviate energy poverty (including vulnerable households, and individuals living in social housing) in designing policy measures to achieve energy savings.



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Recommendation

- Member States should develop frameworks for collective self-consumption and energy sharing by CECs and RECs based on the value that these initiatives can deliver to the energy system – emphasizing their contribution towards the efficiency first principle



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Dutch Climate Agreement: Deliberative stakeholder platform

Tafels Klimaatakkoord



Klimaatberaad



Industrie



Mobiliteit



Gebouwde omgeving



Elektriciteit



Landbouw en landgebruik



Bron: Het ministerie van EZK heeft op 20 maart de samenstelling van de tafels bekend gemaakt www.rijksoverheid.nl



REScoops well known to be involved in production

Result: Non binding Community Energy target:
50% community ownership of onshore wind and large onshore solar installations



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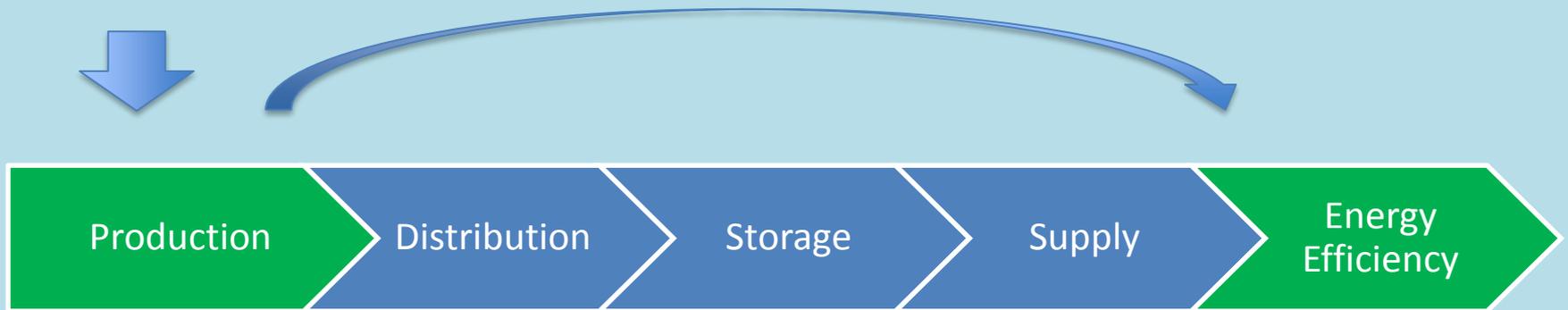


Energy Communities

Local control and value driven.

Taking control over the value chain of energy.

50% ownership



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REScoopPlus supported the case for community energy and EE in the Netherlands

- REScoops valued as important partner in EE (especially district heating and collective action)
- €2.5 milion a year support for REScoops to develop their position in the market on RESproduction and EE
- €20 milion development fund for project development (production)



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