Participatory Value Evaluation: involving a large and representative group of citizens in the energy transition

Niek Mouter n.mouter@ tudelft .nl niek@populytics.nl





Drie reasons to involve citizens

Substantive reason

- Participation can lead to better decisions. Citizens can contribute knowledge that is new to experts and policymakers.
- Through participation, policymakers learn about citizens' priorities.

Normative reason

 Democracy means involving citizens in government decisions when they are (significantly) affected by them.

Instrumental reason

 Good participation can lead to support, acceptance, legitimacy and stronger trust in the government.



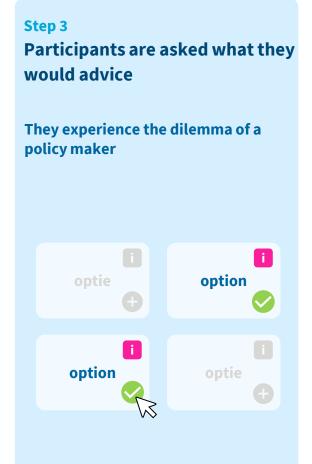




In a PVE, citizens take a seat in the chair of the decision maker for 15 minutes

Step 1 They see the most important policy options option option option option







More than 100 applications in real projects in the Netherlands





























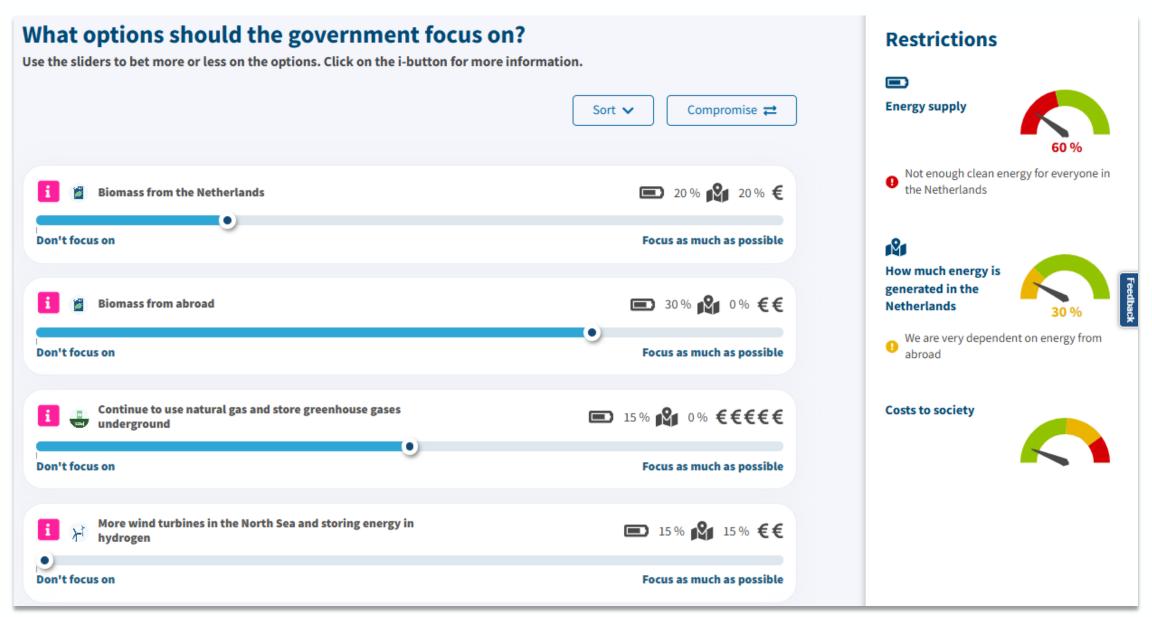








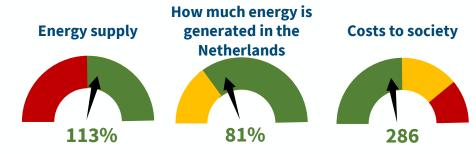






What options should the government focus on?

Average recommendation



Insights

Focus most on:

- Sustainable heating options
- More wind turbines in the North Sea and energy storage in hydrogen.

Focus least on:

- Continuing to use natural gas and CO₂ storage
- Biomass from abroad

Noteworthy:

- Overall recommendation easily meets the 100% energy supply target
- Most participants recommend generating 70%–90% of the energy supply in the Netherlands from sustainable sources.

		Don't focus on	Focus on as much as possible
i	Biomass from the Netherlands		O 58%
i	Biomass from abroad	35%	
i	Continue to use natural gas and store greenhouse gases underground	40%	
i	More wind turbines in the North Sea and storing energy in hydrogen		O 73%
i	Building large nuclear power plants	44%	
i	Building small nuclear power plants	46%	
i	Reusing heat from industry to heat homes		O 76%
i	Using heat from the ground to heat homes		O 70%
i	More wind turbines and solar parks on land		O 62%
i	Buy renewable energy stored in hydrogen from abroad	O 48%	

The average Dutch citizen believes it is important that the Netherlands is not too dependent on other countries for its energy supply.

"Being as independent as possible is important, as we have hopefully learned after COVID-19 and the war in Ukraine. So, work together where necessary, but minimize dependence."

"Since the coronavirus pandemic, I have become increasingly convinced that we need to become more self-sufficient."

Strong correlation between perception of climate change and policy preference

		The climate is	The climate is	The climate is
	The climate	changing, but	changing, with	changing,
	is not	that is not due to	human activity	mainly due to
	changing	human activity	playing a minor	human activity
Energy option	(1%)	(7%)	role (28%)	(63%)
Biomass from the Netherlands	44%	45%	56%	60%
Biomass from abroad	32%	34%	35%	36%
Continue to use natural gas and store	C00/	62%	48%	34%
greenhouse gases underground	68%			
More wind turbines in the North Sea	T10/	F00/	670/	770/
and storing energy in hydrogen	51%	59%	67%	77%
Building large nuclear power plants	68%	54%	49%	40%
Building small nuclear power plants	55%	56%	51%	42%
Reusing heat from industry to heat	C00/	68%	72%	78%
homes	60%			
Using heat from the ground to heat	FF0/	C00/	CC0/	700/
homes	55%	68%	66%	72%
More wind turbines and solar parks on	F20/	470/	F.CO/	670/
land	52%	47%	56%	67%
Buy renewable energy stored in	420/	E 407	450/	400/
hydrogen from abroad	43%	54%	45%	49%

Strong correlation between perception of climate change and policy preference

		The climate is	The climate is	The climate is
	The climate	changing, but	changing, with	changing,
	is not	that is not due to	human activity	mainly due to
	changing	human activity	playing a minor	human activity
Energy option	(1%)	(7%)	role (28%)	(63%)
Biomass from the Netherlands	44%	45%	56%	60%
Biomass from abroad	32%	34%	35%	36%
Continue to use natural gas and store	C00/	C20/	400/	2.40/
greenhouse gases underground	68%	62%	48%	34%
More wind turbines in the North Sea	F10/	E00/	670/	770/
and storing energy in hydrogen	51%	59%	67%	77%
Building large nuclear power plants	68%	54%	49%	40%
Building small nuclear power plants	55%	56%	51%	42%
Reusing heat from industry to heat	60%	68%	72%	78%
homes				
Using heat from the ground to heat	FF0/	C007	CC0/	700/
homes	55%	68%	66%	72%
More wind turbines and solar parks on	520/	470/	F.00/	670/
land	52%	47%	56%	67%
Buy renewable energy stored in	420/	E 40/	450/	400/
hydrogen from abroad	43%	54%	45%	49%

Insights

Participants who believe that the climate is not changing (due to human activity). Positive about

- Continuing to use natural gas
- Nuclear energy

Explanation: people expect nuclear energy to cause little disturbance.

The climate is changing, mainly due to human activity. Positive about

- Wind energy
- Heat

6 Case studies

Conducted in 2022 - 2023

National

- National climate consultation (11.582 participants)
- National energy consultation (7.986 participants)

Regional

- Gelderland climate consultation (3.298 participants)
- Flevoland energy consultation (2.397 participants)

Local

- Eemnes energy consultation (464 participants)
- Heeze-Leende energy consultation (436 participants)





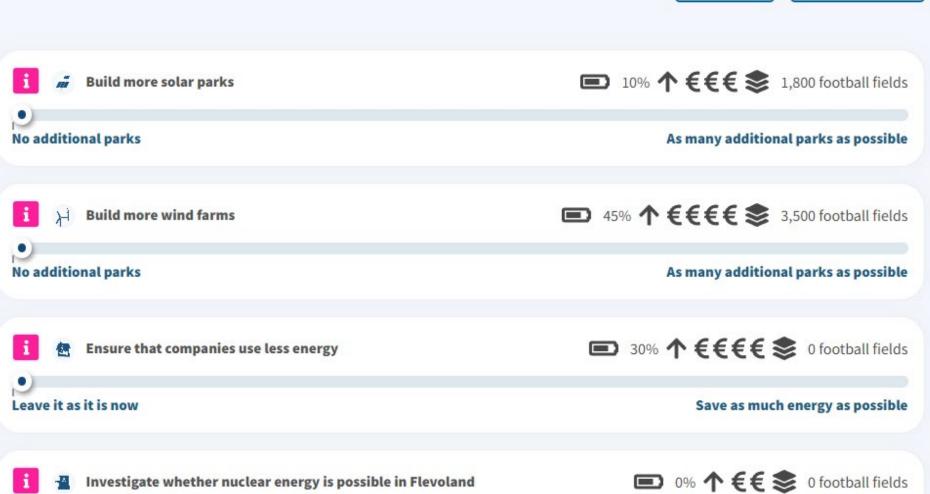
Which measures should Flevoland mainly take?

Use the sliders to assign more or less value to the measures

Do not investigate



Very extensive research



Limits



Generating clean energy in Flevoland



Flevoland generates less sustainable energy than it uses.

Available government money Maximum 101%







Use of space





PVE: five criteria for legitimate public participation

Five criteria for high legitimacy of public participation

- 1 Outcomes are representative for the population
- 2 Everyone can participate
- 3 Stakeholders support the participatory process
- Critique on the design of the participatory process can be refuted
- The outcomes are actionable. Policy makers can show how they improved their policies based on outcomes of PVE

How is this safeguarded in the (design of a) PVE?

- 1 Conduct the PVE with a representative group of citizens
- 2 Open the PVE for everyone
- 3 Involve stakeholders in the design of the PVE
- "Methodology document" is made in which all design choices are underpinned
- Ensure that the PVE mimics the key choice situation on which a policy maker needs to take a decision



Quantitative insights

- 1. In every case, 70-80% of participants believes the government should undertake action to reduce greenhouse gas emissions and supports sustainable energy policy
- 2. Options to build wind and solar farms on land on average rank the lowest in all regional and local PVEs, while they rank average in national PVEs

What are the underlying values and concerns?

Qualitative analysis of motivations provided by 500

- 1.000 participants per case study



National level

Values and concerns

'Security of supply' is the most important value for guiding decisions about the energy transitions

- Independence
- Prevent sudden cost increases
- Take responsibility
- National pride

Being as independent as possible is important, we have hopefully learned after
Corona, the war in Ukraine and the espionage and other negative actions of China, among others. There is great unrest in many areas in the world. So work together where necessary but with as little dependence as possible."

We can do a lot, just as the Netherlands, just prove that we can do this."

'Protecting the climate 'prioritized over 'protecting the environment'

"The modern landscape is becoming one in which we have to accept wind turbines and solar panels." "Necessary to reach production. The landscape is changing, but we have to accept it. In the past, the landscape has sometimes changed significantly under the influence of certain developments.

We also accepted. Think of industrialization."



Local level

Values and concerns

Landscape aesthetics

Some subgroups still consider 'protecting the climate' to be the most important value, but the majority prioritizes other values, such as:

Heeze-Leende

We live in a beautiful nature reserve and we should preserve it."

Eemnes

"Eemnes is a very beautiful rural village and I would like to keep it that way. Make sure it doesn't become too full because there are already so many homes being added."

Health

"The impact on the residents of Sterksel is already extremely large and negative. Odor nuisance and enormous numbers of truck movements with associated (noise) nuisance. This cannot be allowed to get any bigger."

Place identity

"On the Meentweg, the municipality is very critical of views of the open area. This is decisive for the entire municipality and must be preserved."



Regional level

Values and concerns

19

"I find windmills and solar parks to be unpleasant to see. I understand that this will have to be done in a sustainable society."

Choices and value trade - offs resemble those at the local level: prevent impact on landscape related values. Motivations suggest more openness to wind and solar because necessity is understood

Gelderland

Wind turbines > solar panels

Flevoland

Solar panels > wind turbines

They belong to us, the Dutch, not to commercial parties that want to make as much profit as possible and do not care about the users of their products

"It's already completely full. Now it seems as if almost only the polder is being filled up. And we as residents don't notice this. not actively approached to participate with a discount, etc."



18 november 2025

Wat inzichten uit percepties inwoners overheidsbeleid

What are the conditions for the 'silent middle group' to accept ambitious sustainability policies?

- 1. Climate measures that directly affect citizens' personal lives are only acceptable if other measures have been applied to the maximum extent possible and the government pursues a strict policy against major polluting sectors.
- 2. Protect low incomes and prevent the gap between rich and poor from widening.
- 3. The polluter must pay.
- 4. The benefits of a measure must outweigh the costs and there must be no better alternative.
- 5. Ensure that energy companies are transparent about profits and that profits are not too large.

Important factors that explain differences in perceptions between groups:

- 1. How strongly do people perceive the problem? (concerns about climate)
- 2. Financial position
- 3. Level of education



Why do Dutch governments often use PVE to involve citizens?

Reasons mentioned by policy makers in 9 case studies

- Good that you reach a representative group of citizens and also a new group of citizens.
- Results of PVE are more actionable because citizens experience your dilemma before giving an advice.
- PVE provides nuanced (quantitative) insights and insights about values underlying preferences.
- Insights can be used to make policies more 'citizen oriented'.
- 5 The method is efficient. Low costs per participant.



References

- Mouter N, Koster PR, Dekker T. 2021a. Contrasting the recommendations of Participatory Value Evaluation and Cost - Benefit Analysis in the context of urban mobility investments. Transportation Research Part A: Policy and Practice 144: 54 – 73
- Mouter N, Koster PR, Dekker T. 2021b. Participatory Value Evaluation for the evaluation of flood protection schemes. Water Resources and Economics 36, 100188
- Bahamonde Birke et al. 2023. How do I want the city council to spend our budget? Conceiving Maas from a citizens' perspective (as well as biking infrastructure and public transport. Transport Policy.
- Mouter N, Shortall RM, Spruit SL, Itten AV. 2021c. Including young people, cutting time and producing useful outcomes: Participatory Value Evaluation as a new practice of public participation in the Dutch energy transition. Energy Research & Social Science 75.
- Mouter N, Hernandez JI, Itten AV. 2021d. Public participation in crisis policymaking. How 30,000 Dutch citizens advised their government on relaxing COVID 19 lockdown measures. PLoS ONE 16(5): e0250614.
- Mulderij, L.S., Hernandez, J.I., Mouter, N., Verkooijen, K.T., Wagemakers, A. 2021. Citizen preferences regarding the public funding of projects promoting a healthy body weight among people with a low income. Social Science & Medicine 280, 114015.
- Itten, AV., Mouter, N., 2022. When Digital Mass Participation Meets Citizen Deliberation: Combining Mini and Maxi-Publics in Climate Policy Making. Sustainability.
- Dekker, T., Koster, PR., Mouter, N., 2024. A micro economic framework for Participatory Value Evaluation. Journal
 of Choice Modelling 52.



