RESPONSIBLE DECISION-MAKING ON GAS: HOW INDIVIDUAL AND INSTITUTIONAL FACTORS INFLUENCE PUBLIC EVALUATIONS OF GAS

Aim of the project

The use and production of gas is causing controversies, as reflected in debates about the earthquakes in Groningen, production activities at vulnerable locations, shale gas, imports from Russia, and its fossil nature. At the same time, it is advocated that gas can play an important role in the sustainable energy transition, for instance through innovations such as green gas and power-to-gas. It is a societal and ethical challenge to determine what role, if any, gas can play in the (future) energy system. We study how the public, authorities and other stakeholders evaluate gas, what causes concerns about gas, and how to adequately address and weigh these concerns in responsible decision-making. We investigate how individual factors (such as values, moral considerations) and institutional factors (such as governance structures, participation) influence public evaluations of gas.

People's values

The extent to which people endorse different values, namely biospheric (caring about the environment), altruistic (caring about other people), egoistic (caring about personal resources), and hedonic (caring about personal pleasure and comfort), influence public acceptability of different energy sources. The stronger their biospheric and altruistic values, the less acceptable people find fossil fuels, including gas, most likely because of the perceived negative consequences for the environment and future generations. In contrast, stronger egoistic and hedonic values lead to higher acceptability of fossil fuels, probably because of the perceived low costs and convenience. Taking people's different values in account is critical for responsible decision-making on gas.

Promoting gas as sustainable

Environmental frames are often used in an effort to increase public support for energy sources. While it has been argued that emphasizing the environmental benefits of sustainable energy sources can increase their public support by speaking to those who care about the environment, it is not clear if a strategy like this would increase public support for energy sources that are not typically considered to be sustainable by the public. We studied how environmental frames and values influence public support of energy sources that varied in how environmentally friendly were perceived to be, including natural gas. Contrary to previous literature, emphasizing the environmental benefits of energy sources increased their public support no matter people's values nor whether they were perceived to be environmentally friendly to being with. That is, environmental frames increased public support for energy sources typically perceived as highly environmentally friendly such as solar, but also for energy sources typically perceived as low in environmental friendliness, such as natural gas.

Public participation in decision-making and trust in decision makers

People resist energy projects if they feel excluded from the decision-making. Engaging the public in decision-making can increase perceived procedural fairness, which in turn increases public acceptability of energy projects. At the same time, people accept energy projects if they trust the decision makers (e.g., governments, energy companies). Either engaging people themselves in

decision-making or building trust in the authorities taking the decisions can therefore lead to more responsible decision-making about gas.

Stakeholder perspectives on the role of citizens in the Dutch heat transition

While citizen inclusion in the Dutch heat transition is considered a key priority, stakeholders have diverging views on the types of roles and responsibilities that are appropriate for citizens. These diverse perspectives are based on different evaluations of people's identities, needs, values, motivations, skills and capabilities around energy, and result in vastly different participation approaches. We found that there are at least five different perspectives, each of which gives priority to different groups of citizens in the heat transition: 1) Meaningful participation in a diverse society; 2) Strong and enthusiastic communities in the lead; 3) NIMBYs, social contestation and the threat to decarbonisation; 4) Collectivism & vulnerable groups at risk; 5) Unburdening individual user-consumers in the transition. All of these perspectives build upon simplistic and stereotypical biases, however, especially those that produce only marginal agency for citizens can be considered problematic.

Imagined publics and implications for a just and inclusive hydrogen system in the Netherlands

Hydrogen has emerged as a particularly promising carbon-free energy carrier that could at least partially replace natural gas in the Netherlands. So far, the hydrogen transition is technocratically organised, despite the importance given to citizen inclusion in the wider energy transition. Publics, in their various roles and compositions and with their various demands, are rarely acknowledged nor represented in hydrogen (pre)policymaking, which results in injustices. Based on the ways in which publics are described in critical hydrogen vision documents, we conclude that there are a number of stereotypical biases and framings – such as, the public's assumed lack of knowledge and it's self-interested nature – that result in misrecognition of publics around hydrogen. In other instances, the public is absent from the future of hydrogen, which is also problematic because it leads to an oversight of the potential societal impact of future hydrogen technologies and systems. Misrecognition and non-recognition can result in additional distributive and procedural justice issues, once they become performed in and by policy, technology and infrastructure.

Societal value creation in multi-stakeholder energy projects

Large-scale and innovative renewable energy projects are increasingly developed in consortia of public, semi-public and private actors who seek to bundle insights, skills, resources and relationships. The active collaboration of these diverse actors in project development forces open narrow understandings of the commercial value of energy projects and triggers discussions on the project's value to, and relationship with, local, regional and national society. For some actors, societal value is amply created when a project contributes to decarbonisation of energy provision; other actors, however, expect renewable energy projects to also facilitate regional socio-economic growth, to contribute to local knowledge and expertise, or to enable citizen empowerment and the democratisation of energy, amongst others.

In our research, we found that the successful and socially acceptable development of critical energy infrastructures and assets by these consortia requires actors not only to arrive at a mutually shared understanding of 'value creation for and with society', but also to build the collaborative capacity to

act upon these shared understandings. We identified how collaborating actors can develop or gain the necessary resources and capabilities to create societal value, but also identified barriers to this process.