

Energy governance for sustainable development: Implications of energy diversification and recommendations for revenue management

ENERGO Project Policy Brief No2

Stella Tsani

Department of Economics, National and Kapodistrian University of Athens, Greece

Chrysoula Chitou

Department of Economics, University of Ioannina, Greece

April, 2024



ENERGO

Energy Governance for Sustainable Development

About the ENERGO project

ENERGO undertakes a thorough investigation of the public policies that relate to local content and sustainable management of energy projects. ENERGO further assesses the policy implications of diversification of energy sources (increasing penetration of renewable energy sources in the energy mix and fossil fuel divest) and sustainable development targets for revenue management.

Both Norway and Greece aim at exploiting their energy resources considering sustainable development goals, just energy transition and climate change policy targets. In this context, local content and prudent management of energy revenues play a crucial role. “Local content” refers to the creation of jobs and innovation opportunities for local communities and businesses. “Revenue management policies” refer to the use of public revenues generated from energy projects for investment (e.g., infrastructure), saving or spending. Local content can reverse “brain drain” and stimulate innovation. Prudent revenue management is linked to both sustainable development goals and climate change mitigation policies.

Addressing questions related to local content and revenue management for energy projects is relevant to both Norway and Greece. Analysis can provide mutually beneficial insights and useful results for other countries in the Southeast Mediterranean, like Cyprus. ENERGO project aims at the advancement of scientific evidence-based mutual knowledge development in the fields of energy economics and policies, governance, and sustainable development. ENERGO further supports capacity building and continuous collaboration by bringing together a multi-disciplinary team of experts, from Norway and Greece, to systematically analyze common challenges and solutions. The project addresses challenges at national and transnational level in an inter-disciplinary approach and it extracts useful policy recommendations with regards to sustainable and inclusive energy policies in Greece and Norway.

ENERGO is implemented by the [Department of Economics](#) at the [University of Ioannina](#) in collaboration with the [Norwegian Institute of International Affairs](#) and the [Political Economy of Sustainable Development Lab](#) at the [National and Kapodistrian University of Athens](#). The project started in April 2021, has 36 months duration and it is funded by the European Economic Area (EEA) Financial Mechanism 2014-2021 [EEA Grants 2014-2021](#), Bilateral Fund.

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This policy brief is based on the work completed for Work Package 2 of the ENERGO project. Authors acknowledge contribution from all project partners: Yorgos Goletsis, Nikolaos Mylonidis, Indra Overland, Andreas Papandreou, Apostolis Tsiouris, Alexandros Tsioutsios. Project partners acknowledge financial support from the EEA Grants 2014–2021, Bilateral Fund, under the project “Energy Governance for Sustainable Development”. The funding source has not been involved in the study design; in the collection, analysis, and interpretation of data; in the writing of the related policy briefs and scientific papers, and in the decision to submit the project materials for publication. Any errors or omissions remain the authors’ responsibility. The authors declare no known interests.

How to cite: Tsani, S., Chitou, C. (2024). Implications of energy diversification and recommendations for revenue management, ENERGO Project Policy Brief No2.

Corresponding author: Stella Tsani, Department of Economics, National and Kapodistrian University of Athens, Sofokleous 1, 105 59, Athens, Greece. E-mail: stsani@econ.uoa.gr

Implications of energy diversification and recommendations for revenue management

Increasing penetration of renewable resources in the energy mix, fossil fuel divestment and sustainable development targets reframe the policies and targets for revenue management related to the exploitation of energy resources. In the case of oil and gas revenues, a fair allocation between current and future generations might be deemed as more important as the resources are exploited at the expense of the future generations. But if the source of revenues is renewable energy, then the allocation of benefits across the local community that bears the costs of the operation, and the rest of the society might be of greater importance. In the context of sustainable development goals, climate change and resilience to unforeseen socio-economic shocks, like the latest Covid-19 pandemic or the recent collapse of the oil markets, new challenges emerge for the prudent and sustainable revenue management. The choices made have important implications for portfolio allocation, risk, and socio-economic resilience.

The impact is particularly significant for Sovereign Wealth Funds (SWFs) that manage revenues from natural resources; consider for instance the oil-based Sovereign Wealth of Norway. Meeting the timely energy and sustainability transition requires significant investments in projects with much higher social than private returns. Norway's fund is a significant point in the scholarly literature for its role in promoting sustainable development (see for instance the works of Atkinson and Hamilton (2020), Al Hunnes (2019), Reiche (2010), Takle (2021), Al Ayoubi and Enjolras (2022), Gasparini (2023), Stoknes et al (2024), Miglietta et al (2023), Øvald et al (2023)). The fund's ethical regulations put sustainability issues at the core of its investment priorities and have been effective in contributing to climate protection policies by excluding businesses responsible for significant environmental damage from the fund's portfolio. The fund has consistently committed to addressing environmental issues in its strategy, driven by intergenerational responsibility and adherence to ethical standards. This demonstrates a proactive response to the energy transition, emphasizing the broader implications for sustainability. The potential revenue loss from limiting oil extraction poses a substantial

challenge for the fund, necessitating the identification of alternative resources for financing public expenditure and annual budgets. Repurposing investments with green offshore energy could reverse job decline and result in a positive relationship between the SWF and sustainable development.

When looking at the implications of energy transition for SWF management several points of consideration can be highlighted. An important aspect to consider regards risk exposure of the sovereign investors. Heavy investments in traditional energy assets, such as oil and gas, may face increased risk due to the declining profitability and demand for fossil fuels. While this indicates a dependency and stranded asset risk, it may also relate to diversification opportunities as the energy transition presents SWFs with opportunities to diversify their portfolios by investing in renewable energy and other sustainable assets. Such diversification may support positive outlooks of returns in the long run as renewable energy projects often have steady cash flows and low operational costs. Additional risks coming with energy diversification regard the policy and regulatory risks. Investments in renewable energy projects may be exposed to policy and regulatory risks, including changes in government incentives, subsidies, and environmental regulations. Additionally technological innovation, essential for the energy transition may put additional positive outlook to energy diversification imperatives but may also expose investors to high volatility related to the speed and direction of technological innovation.

Despite the challenges related to energy transition, institutional investors, such as SWFs managing revenues from energy sources are well positioned to support the sustainability imperative. In a period of feeble global economic growth and weak financial markets, there is a limit to how much of the required long-term investment capital for the energy and sustainability transition will come from private investors, especially for investment in developing countries with thin financial markets. By contrast, large institutional investors like SWFs may offer a financing alternative for sustainability- and climate change-related projects with high social value added. SWFs have grown in number from 30 in 2000 to over 100 in 2024 with a total value of accumulated assets to more than 12 trillion. SWFs are designed with an intrinsically long-term perspective and employ long-term investment horizons (Tsani and Overland, 2020). Thus, SWFs have a self-interest in preventing climate change and its long-term impacts on the world economy and their broader portfolios. Six of the world's largest SWFs, the Abu Dhabi Investment Authority,

the Kuwait Investment Authority, the New Zealand Superannuation Fund, Norges Bank Investment Management of Norway, the Public Investment Fund of the Kingdom of Saudi Arabia, and the Qatar Investment Authority joined on July 6th, 2018 the President of France, Emmanuel Macron, and the Prime Minister of Norway, Erna Solberg, in the One Planet Sovereign Wealth Fund Working Group with the aim to integrate climate change risks in the management of large long-term asset pools (One Planet 2018). The resulting One Planet SWF framework encourages long-term investors to consider climate-related risks and to update SWFs' priorities given their leadership and pivotal role in the financial markets.

Well-managed SWFs can indeed support the implementation of climate policy and energy transition through investment in high social impact green projects, the improvement in public spending and the fostering of international competitiveness. Through the employment and the promotion of commonly accepted investment standards and practices (such as the One Planet Sovereign Wealth Fund Framework), SWFs can further promote sustainable development through the financing of more green and ethical investment. For countries that operate hydrocarbon-based SWFs this shift to green investments can have profound implications for their economic diversification and smooth transition to the post-oil era. Investments in clean energy production, renewable energy and the electrification of transport can enable traditional oil and gas producers to close the gap with other economies in the race of new clean technologies and possibly reap first mover technological advantages.

While recent trends point to an optimistic view of future developments about green financing being backed up by large institutional investors, the experience with SWFs to date and a closer look at their operational characteristics indicates the barriers that can impede SWFs from actively interacting with the sustainability and energy transition. While SWFs are better placed for long-term investments, they also face several key constraints that limit their energy transition related financing. While in general SWFs can invest in long-term assets, their short-term liabilities and need to make payments in the short-run might limit their ability to undertake long-term green investments. This might particularly be the case for stabilization funds that have to withdraw capital frequently to hinder the short-term destabilization of the economy. The need for short-term

withdrawal cannot be accurately predicted, and this significantly lowers the ability of the funds to hold long-term investment assets.

The risk profile of a SWF is determined by several factors such as the rules governing the fund, the links with the overall budgetary process, governance, and oversight issues, public scrutiny of the investment portfolio, the investment strategy and stakeholder engagement. These factors differ in large among different SWFs making it difficult to establish a common risk profile. In addition, the different determinants of the risk profile of the funds might put pressure on SWFs to mobilize investments in different directions. The time required for decision-making and the levels of governance and different stakeholder groups that are engaged in the decision-making process may further discourage climate and energy transition related investments. This is linked to the different perceptions and priorities that each level of governance and/or stakeholder groups can have with regards to the risks and the returns associated with alternative investments.

Asset managers are often assessed based on short-term performance, which may discourage longer-term investments, including those in energy-transition targets and initiatives. The lack of updated benchmarks that accurately reflect the costs and benefits of green investments exacerbates this issue. Additionally, investment allocation in energy transition supportive projects face information asymmetries and limited data regarding climate-related investment opportunities, environmental impact, and performance measurement. Despite efforts to address these challenges, progress has been slow, hindering investment management ability to invest in climate and energy transition projects.

Research on the links between revenue management and energy transition indicates that governance is essential for the development of robust long-term investment strategies. Political independence may play a part in coordinated action and overcoming practical challenges. Independence necessitates a clear distinction between the dual role of the state as an owner of the SWFs and energy related revenues and promoter of investments. Clear communication channels are important for all parties to fully understand the objectives of the SWFs, investment priorities, associated risks and returns of the different investment alternatives. Good governance should be coupled with high levels of transparency that can allow for the close monitoring of SWF investment practices and

how they meet energy and sustainability transition imperatives. Transparency is important for the end beneficiaries. When fund operations are transparent, local communities and residents can follow closely the investments made by the funds, assess their performance and management, and not feel alienated from their current and future wealth (Tsani and Overland, 2020).

SFWs need to develop tangible green investment policies and targets and appropriate performance indices and strategies and to actively participate in sustainable investment coalitions or platforms. Here the role of the governments in supporting national and international efforts is important. The update in investment priorities can be supported from international efforts such as the One Planet Sovereign Wealth Fund Working Group. Countries like Norway, i.e. developed, more open and experienced with resources revenue management may share experience and good practices with newcomers countries in the field (consider for instance the case of Greece, Cyprus etc). Future research should dig deeper into the practical aspects of such coordinated action and experience sharing to contribute to well-informed decision making. Key recommendations for policy making, drawing from the works to date include:

- Coordinated action and targets between long-term green investments and short-term revenue management mandates.
- Targeting cohesion and coherence between management and stakeholders' investment priorities and perceptions.
- Well-coordinated management and investment allocation of SWFs assets with the wider budgetary process and national/regional climate change and energy transition imperatives.
- Support of strong information provision on green investment alternatives, risks and returns.

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