# Article information:

Modeling of the dominican republic energy systems with OSeMOSYS to assess alternative scenarios for the expansion of renewable energy sources - ScienceDirect
<https://www.sciencedirect.com/science/article/pii/S2772427122000389>

# Article summary:

1. The Dominican Republic is highly vulnerable due to climate change and its dependence on fossil fuel imports.

2. To reduce costs and greenhouse gas emissions, the DR has installed renewable energy sources such as solar and wind power.

3. OSeMOSYS, a modeling tool that considers sectoral coupling, has been used to identify optimal routes for diversifying the DR's energy mix towards sustainable development with clean and accessible energy.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

The article "Modeling of the Dominican Republic energy systems with OSeMOSYS to assess alternative scenarios for the expansion of renewable energy sources" provides an overview of the energy system in the Dominican Republic (DR) and proposes a modeling approach using OSeMOSYS to assess alternative scenarios for the expansion of renewable energy sources. While the article presents some valuable insights, it also has several limitations and potential biases.

One-sided reporting is evident in the article's focus on renewable energy sources as a solution to reduce costs, greenhouse gas emissions, and dependency on fossil fuels. The article does not provide a balanced view of the challenges associated with renewable energy adoption, such as intermittency, storage, and grid stability issues. Additionally, there is no discussion about potential trade-offs between economic development and environmental sustainability.

The article claims that sectoral coupling is a decisive factor for a sustainable energy system that incorporates a high proportion of variable RES such as photovoltaic and wind power. However, this claim lacks evidence or supporting data. The article also fails to consider other factors that may impact the feasibility of renewable energy adoption in SIDS, such as political instability, lack of infrastructure, and limited financial resources.

Another limitation is that the article does not provide sufficient information about how OSeMOSYS works or how it was used to model DR's energy system. The methodology section only briefly mentions OSeMOSYS without providing any details about its features or limitations. This lack of information makes it difficult for readers to evaluate the validity and reliability of the modeling results.

The article also has promotional content by highlighting OSeMOSYS as one of the best performing open-source tools for modeling energy systems in SIDS without providing any comparative analysis with other available tools. This promotional tone raises questions about potential conflicts of interest or bias towards OSeMOSYS.

Finally, while the article acknowledges DR's vulnerability from climate change and high dependency on fossil fuel imports, it does not discuss potential risks associated with coal-fired power plants or natural gas pipelines. These risks include air pollution, water contamination, land degradation, and public health impacts.

In conclusion, while this article provides some valuable insights into modeling DR's energy system using OSeMOSYS to assess alternative scenarios for renewable energy expansion, it has several limitations and potential biases that need to be addressed. A more balanced approach that considers both benefits and challenges associated with renewable energy adoption would provide a more comprehensive understanding of DR's energy transition pathway.

# Topics for further research:

* Challenges of renewable energy adoption in small island developing states
* Trade-offs between economic development and environmental sustainability in energy systems
* Intermittency and storage issues in renewable energy systems
* Grid stability challenges in renewable energy systems
* Comparative analysis of open-source tools for modeling energy systems
* Risks associated with coal-fired power plants and natural gas pipelines.

# Report location:

<https://www.fullpicture.app/item/0eff820305a93085a3c1b69a354b9e88>