Letter in support of Catalyst Cooperative application to Sloan Foundation for funding to up-skill energy data practitioners in the United States

Robbie Morrison
robbie.morrison@posteo.de
Schillerstraße 85, 10627 Berlin, Germany
Lead administrator
Open Energy Modelling Initiative (openmod) online discussion server
https://forum.openmod.org

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To whom it may concern

1 Introduction

Catalyst Cooperative is a civil society organization based in Boulder, Colorado whose mission is to improve public access to published energy data in order to advance clean energy and slow climate destabilization.

Catalyst Cooperative is currently applying for funding from the Sloan Foundation to run a project entitled "Training the next generation of open-source energy data practitioners".

This project provides for hands-on training in good data practice for early-stage researchers in the energy domain. Deliverables will include training modules and a wiki or similar to collate data sources and operational guidelines. Matters related to equity will also be traversed.

Co-founder Zane Selvans recently approached me in my capacity as the lead administrator of the Open Energy Modelling Initiative (openmod) online discussion forum. Our server is located at https://forum.openmod.org.

Zane inquired whether the openmod forum would be willing and able to provide an online venue for hosting discussions and facilitating community support in relation to this proposed Catalyst Cooperative project — and also for any subsequent developments to foster continuity.

As the lead administrator of the openmod forum, I can confirm that we have the capacity and the interest to provide such services. Indeed, such activity falls well within the objectives of our forum. Moreover, I would look forward to the synergies that will doubtless arise as the two communities mix and interact.

The Open Energy Modelling Initiative itself is unable to endorse this or any funding proposal because there is no mandate for making such decisions within our community. But under the founding ethos of our community, I can offer the services of the openmod forum in this regard, being a key player in this context.

The remainder of this letter outlines the Open Energy Modelling Initiative as an informal organization, provides some background on myself, describes the online forum, the need to up-skill energy data practitioners, and concludes with some observations.

2 About the Open Energy Modelling Initiative

The Open Energy Modelling Initiative was formed in 2014 in Berlin, Germany by 28 modelers to promote all aspects of energy system modeling as open science: open source development, genuinely open data and community curation, open standards, shared scenarios, and published and repeatable workflows. The openmod is not incorporated under law. It has, to date, organized 18 workshops in multiple countries and runs several online services, including the discussion forum that is the subject of this letter.

Since its formation, the openmod has diversified geographically. Indeed, the openmod forum has participants from all over the world, including the global south: places like Bolivia, South Africa, United Arab Emirates, Vietnam, and Zambia, to name just some.

3 About myself

I have been involved in national-level high-resolution, contiguous-time energy system modeling for public policy support since 1995. In 2003, I released the first open source energy modeling framework, named deeco, and attempted, unsuccessfully, to build an online development community. I was the codebase maintainer for seven years, although deeco itself was designed by Helmuth Groscurth and originally implemented by Thomas Bruckner.

I began contributing to the Open Energy Modelling Initiative 18 months after its formation, when I first learned of its existence and have been active since. I took on the role of lead admin of the forum in January 2021.

I was invited to join the steering committee of the Open Energy Ontology (OEO) project in 2020. An ontology is a formalized way of documenting the semantic structure of domain information in order to assist both software design and data collection and curation.

I have followed the evolution of data law in the European Union over the last seven years. And have made several public submissions on proposed legislation to the European Commission under my own name. The legal context for non-private numerical data in the United States is comparatively much simpler than for Europe.

An academic publication of relevance in this context would be: Morrison, Robbie (April 2018). "Energy system modeling: public transparency, scientific reproducibility, and open development". *Energy Strategy Reviews*. **20**: 49–63. ISSN 2211-467X. doi:10.1016/j.esr.2017.12.010. Open access.

4 About the openmod online discussion forum

The openmod discussion server has just over 1300 registered users, all carefully vetted to avoid trolls being admitted (because we had problems in the beginning). The forum commenced in January 2017 using the Discourse software. There are currently two administrators and both support this letter.

One of the purposes of the forum is to provide a common venue for individual projects, spanning both systems modeling and data, to access support. The Catalyst Cooperative proposal therefore folds easily into this aim.

On the technical level, a separate category hierarchy would be added for this particular project. And Catalyst Cooperative would duly provide maintainers dedicated to their assigned category.

5 On the need to up-skill energy data practitioners

As the Catalyst Cooperative application indicates, there is a clear need to up-skill practitioners in the domains of energy systems analysis and data management. Their proposed project should help address this shortfall in energy data literacy.

The data required for energy systems modeling originates equally from academic research and from industry and therefore requires considerably more negotiation and navigation than is required for stand-alone scientific disciplines.

The Sloan Foundation should be aware too that good data practice is an evolving theme. One such aspect concerns the ongoing development of the overarching standards that govern data collection and categorization — a process that necessarily requires discussion and consensus to advance. The Catalyst Cooperative project has the potential to contribute positively to these broader agendas — and in doing so, furnish collective benefits.

6 Closure

The broad aims of Catalyst Cooperative and the Open Energy Modelling Initiative overlap to a large extent. The administrators of the Open Energy Modelling Initiative forum are also enthusiastic about this Catalyst Cooperative project and its mission. We are therefore happy to provide an online venue and an allied community to assist with their project.

The openmod should also gain from the related discussions as energy systems analysis is a global endeavor. The proposed arrangements for using our forum for support could therefore provide reciprocal benefits.

The IPCC has been progressively refining the remaining global carbon budget available for any kind of reasonable future for humanity. That collective aspiration currently stands at net-zero by 2050 — a very short 26 years away. Therefore, every possible effort to reach that target is required.

To close, the administrators of the openmod forum are in full support of this funding application. We ask that the Sloan Foundation consider the application favorably and advise that the forum administrators look forward to providing the requested support.

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