



U.S. Department of Energy Categorical Exclusion Determination Form

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Proposed Action Title: New York University -- Grid Dynamics and Energy Consumption Patterns Through Remote Observations of City Light

Program or Field Office: Advanced Research Projects Agency - Energy

Location(s) (City/County/State): Brooklyn, NY

Proposed Action Description:

Funding will support New York University's (NYU) information gathering and analysis efforts to develop an observational platform to remotely reveal energy usage patterns of New York City by exploiting imaging of urban skylines. Specifically, NYU will develop a map of NYC lighting technology and a measure of the correlation of lighting technology and consumption patterns in order to develop a model that can predict energy consumption. If successful, NYU's model will provide key information to monitor and forecast energy consumption enabling it to determine lighting types used in exterior and interior spaces, impacts on demand, identify buildings for lighting retrofits, and measure technology penetration as a function of socio-economic factors. The model could provide information similar to state-of-the-art smart meters (\$1,500/building) at a much lower cost (\$100/building).

The proposed project activities under this award are limited exclusively to intellectual, academic, or analytical activities. NYU will not conduct physical experiments, prototype fabrication, demonstration projects, or similar activities under this award.

Categorical Exclusion(s) Applied:

A9 - Information gathering, analysis, and dissemination

For the complete DOE National Environmental Policy Act regulations regarding categorical exclusions, including the full text of each categorical exclusion, see Subpart D of [10 CFR Part 1021](#).

Regulatory Requirements in 10 CFR 1021.410(b): (See full text in regulation)

The proposal fits within a class of actions that is listed in Appendix A or B to 10 CFR Part 1021, Subpart D.

To fit within the classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, a proposal must be one that would not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities; (3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Subpart D, Appendix B; (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B(5) of 10 CFR Part 1021, Subpart D, Appendix B.

There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal.

The proposal has not been segmented to meet the definition of a categorical exclusion. This proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1)), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions during preparation of an environmental impact statement.

Based on my review of the proposed action, as NEPA Compliance Officer (as authorized under DOE Order 451.1B), I have determined that the proposed action fits within the specified class(es) of action, the other regulatory requirements set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.

NEPA Compliance Officer: *Leah Koch* for William Bierbower
(This form will be locked for editing upon signature)

Date Determined: 8/28/2017