

Call for Proposals

STDF Targeted Calls

“TC/5/Energy/2010/Renewable”

1. Preamble:

According to the Presidential decree number 218/2007, under which the Science and Technology Development Fund (STDF) was founded, the STDF mandate is to promote science and technology (S&T) through funding scientific research and technological development in a way that supports the complete cycle of innovation. The STDF vision is to act as a tool of change for the improvement of the life of Egyptians. Its mission is to generate a critical mass of human, logistic and infrastructure resources that are needed for a complete cycle of innovation. Consequently, the STDF specific objectives are to fund S&T activities, develop innovation capacity, enhance and monitor S&T systems and develop appropriate and flexible funding mechanisms for S&T. A major component of the STDF general plan is to implement its objectives within the context of the national S&T development strategy which is the direct product of the Higher Council of Science & Technology and the individual strategies of the Egyptian Ministries.

2. Call reference no.: TC/5/Energy/2010/ Renewable.

3. Call name: Renewable Energy – Design, Fabrication and Verification/Testing of 1.5 MW Wind Turbine.

4. Call description:

Energy is a basic human need for both human development and economic growth. A national priority is to ensure secure, reliable, affordable, clean and sustained energy supply.

Egypt is relatively modest in its resources of conventional energies (oil and gas) as compared with most of the Arab countries or Iran. Figures of June 2008 show that oil reserves in Egypt are 4.1 Bbl, compared to Saudi Arabia of 264 Bbl and Iran of 138.4 Bbl.

As for natural gas, the situation is somewhat better. Resources announced show Egypt with 73 Tcf, Saudi Arabia with 253 Tcf and Iran with 982 Tcf.

The last 5 years showed an average annual increase in primary energy consumption of nearly 5%. To ensure sustainability of energy supply in the long term, it is clear that we need to exploit additional sources other than oil and gas.

Egypt is now adopting a National Energy Strategy, announced by the President in October 2007. It is composed of 6 basic elements:

1. Developing more resources and increasing levels of production of oil and gas,
2. Become a regional hub and center for trade and services for oil and gas activities & industries,
3. Setting clear energy efficiency and conservation policies and plans,
4. Managing the level of oil and products' subsidies in the context of other public priorities,
5. Upgrading contribution of renewable energies in the energy mix to levels compatible with our natural potentials , and
6. Resorting to nuclear energy for part of our electricity needs as a strategic option.

In implementation of this Energy Strategy, the Supreme Council for Energy has set a target of 20 % of our electric energy needs by 2020 to come from renewable sources, particularly wind and solar. The installed capacity needed by 2020 from renewable energy – in light of forecasted growth – is estimated to be between 8000 to 10000 MW. Double that amount is needed for the period 2020/2030 for local consumption.

5. Call objectives and desired outcomes:

The current call of 1.5 MW Wind Turbine research program represents an integrative approach towards the development of wind turbine design, fabrication and testing technologies in Egypt, capitalizing on the general plan of the STDF and its objectives regarding the promotion of innovation in the Egyptian scientific community. This would entail reaching, through the proposed research projects, innovative approaches towards development of renewable energies, with high scientific value as well as potential economic revenues.

6. Call subjects/topics:

Researchers or teams of researchers from different institutes, industrial and civil society enterprises are invited to submit proposals for Design, Fabrication and Verification/Testing of 1.5 MW Wind Turbine suitable for operation in the Egyptian harsh operating environment e.g. Red sea zone. The required 1.5 MW Wind Turbine should operate efficiently in the Egyptian environment of high temperature, high humidity, and existence of sand and high wind speed that may reach to 11 m/sec with a capacity factor of 60%.

7. Eligible applicants:

Egyptian universities; research centers; civil society; non-profit organizations; Small and Medium Enterprises (SMEs) and industry can apply to this call.

Both research teams and individuals could apply to this grant; however teams consisting of researchers from both academia and industry are encouraged.

The following criteria should be fulfilled in order to be eligible for a call:

- Any Egyptian citizen who is affiliated to an Egyptian institution may apply as a principal investigator (PI).
- The work should be carried out in Egypt; some activities might be conducted outside Egypt, if deemed necessary and upon the approval of STDF.

- An applicant may submit and awarded more than one proposal under this call for proposals provided that the applicant provides information to STDF on workload distribution among the submitted projects.

8. General terms and conditions:

- All research projects shall be evaluated on a competitive basis.
- All proposals must include in addition to the scope, the benefits and costing of the proposed work.
- The cost structure should be suitable to the proposed scope. No preset limit is defined in this type of national targeted projects.
- General guidelines for preparing the proposals are available at the STDF website: www.stdf.org.eg
- Teams of researchers, of academia and industry or of industrial partners are encouraged. The benefit of partnerships should be highlighted in the proposal.
- All submitted proposals should consider Egypt's environmental conditions.

9. Submission process:

The submission process must be completed by uploading the proposal to the STDF website (www.stdf.org.eg) to which registration is required.

10. Evaluation process:

The evaluation process will be executed by independent experts and the STDF will assure that the process is transparent, impartial and researcher-supportive. Also, after full proposal submission, the STDF officers may make field visits to assess the facility preparedness for the proposed research.

11. Negotiation and contract signing:

Negotiation and grant contract agreement will come into force shortly after the announcement of the second stage results. The intellectual property rights (IPR) will be a core part of the process and will be followed according to the STDF IPR rules (as detailed in the STDF website).

12. Important dates:

- Deadline date for full proposal submission: 01/12/2010