GE Haliade X, 12 MW, 220 m rotor

Motion Compensated Pile Gripper

Innovation Subsidies
Some Practical Information

TKI Offshore Wind
Match Making Day
14 February 2019
Ruud.Oerlemans@rvo.nl
Netherlands Enterprise Agency (RVO.nl)
Positioning

- Discovery (TRL 1-3)
  - NWO-arrangements
- Development (TRL 4-6)
  - PPS Allowance, ECN/TNO
  - MIT
  - SBIR
  - I-krediet
- Demonstration (TRL 7-8)
  - TSE: top sector energy
  - DEI
- Deployment (TRL 9)
  - Fiscal: WBSO, RDA, Innovation Box
  - SDE+
  - BBMKB, GO, grow facility, DVI
  - Fiscal: EIA

Focus on energy and climate change
Top sector energy subsidies

• **Offshore R&D tender.** (Wind op zee R&D)
  1 April – 7 May 2019, €4.5 million

• **Renewable energy subsidy.** (Hernieuwbare Energie)
  until 31 March 2019, €5 million available
  1 April 2019 – 31 March 2020, €50 million

• **Demonstration Energy Innovation (DEI)**, €113 million
  New in 2019: in order of entry.
  various options, some of which important for offshore

• Further information at:
General assessment criteria

• Application is submitted on time and complete;
• Starting after submitting the subsidy application;
• Adequate contribution to the objective of the subsidy;
• It is plausible that the project will be completed within the duration;
• Sufficient confidence that the people involved can finance the project;
• Sufficient confidence that the people involved have the capacity to carry out the project;
• Sufficient confidence in the technical and economic feasibility of the project.
Eligible: activities should comply to definition of R&D

- **Industrial Research** is 'planned or critical research aimed at gaining new knowledge and skills with a view to the development of new products, processes or services, or to significantly improve existing products, processes or services’
  *Industrieel Onderzoek (IO)*

- **Experimental Development** consists of 'acquiring, combining, designing and using existing scientific, technological, business and other relevant knowledge and skills, aimed at the development of new or improved products, processes or services’
  *Experimentele ontwikkeling (EO)*
Projectmanagement

• **Eligible**: Substantially and directly linked to the (substantive) research and development activities. e.g.
  – Substantive discussions with employees;
  – Analyzing technical risks;
  – The preparation of substantive reports;
  – Drafting specifications.

• **Not eligible**: Not directly related to R&D activities. e.g.
  – Escalation to a steering committee;
  – The preparation of a risk management model;
  – Administrative responsibility;
  – Preparing reports to comply with subsidy obligations.
Knowledge dissemination

• Required part of project proposal

• **Eligible:** Substantially and directly linked to the (substantive) research and development activities. e.g.
  – knowledge sharing between project participants; only to the extent necessary for the execution of R&D activities;
  – gathering knowledge from third parties, if this knowledge is necessary for the implementation of the R & D activities.

• **Not eligible:** Not directly related to R&D activities. e.g.
  – sharing with third parties the knowledge gained from the project;
  – Examples: a presentation of the project results at a conference or making a brochure or information brochure;
Grant process (1)

• Use RVO templates for:
  • Project proposal
  • Budget
  • Cost savings
• Use electronic recognition tool (e-herkenningsmiddel)
• Digital submission via eLoket
• See https://mijn.rvo.nl/home for application and templates
• RVO evaluates, based on independent expert advice
Grant process (2)

- Renewable energy subsidy and DEI
  - Decision within 8 weeks
  - First come first serve
  - Depleted budget: lottery
  - Positive $\rightarrow$ subsidy. Negative new application possible

- Offshore R&D tender
  - Decision within 13 weeks
  - Comparative test by experts. Minimal score for subsidy
  - Award based on ranking. Oversubscription no subsidy
Points of interest (1)

• Have your project idea tested

• Submitting application only makes sense if the financing is arranged.
  – per participant (own share = costs - subsidy)
  – send pieces to substantiate

• Non-technological aspects

• Technical feasibility:
  – describe the operating principle well
  – describe earlier research and results
Points of interest (2)

• Economic feasibility:
  – involve partners in the chain, preferably as a participant;
  – describe market, make a business plan and be realistic !!!

• Quality project:
  – Be clear about what you are going to do;
  – Added value with respect to current projects, the step that is taken;
  – Follow-up steps after the project: market implementation, business case end user;
  – No feasibility, explorations, search.

• Research organization involved?
  – Then submit before starting cooperation agreement
# R&D in 2017

<table>
<thead>
<tr>
<th>Code</th>
<th>Organization</th>
<th>Project Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEHE117003</td>
<td>ECN</td>
<td>Dutch Offshore Wind Atlas</td>
</tr>
<tr>
<td>TEHE117007</td>
<td>Marineobjects</td>
<td>Operational Decision Support</td>
</tr>
<tr>
<td>TEHE117012</td>
<td>Delft Offshore Turbine B.V.</td>
<td>DOT Modular drive train</td>
</tr>
<tr>
<td>TEHE117013</td>
<td>Plaxis B.V.</td>
<td>“Development of an Advanced Monopile Design Tool (ADMODETO)”</td>
</tr>
<tr>
<td>TEHE117023</td>
<td>Whiffle B.V.</td>
<td>Coupled High-resolution Atmosphere Sea Modelling</td>
</tr>
<tr>
<td>TEHE117026</td>
<td>Fistuca B.V.</td>
<td>BLUE Piling Offshore Test Project</td>
</tr>
<tr>
<td>TEHE117049</td>
<td>Fistuca B.V.</td>
<td>Offshore Wedge Connection Project Phase 1</td>
</tr>
<tr>
<td>TEHE117056</td>
<td>Delft Offshore Turbine B.V.</td>
<td>Slip Joint Offshore Qualification project</td>
</tr>
<tr>
<td>TEHE117057</td>
<td>Arkom Windpower B.V.</td>
<td>TULIP WIND, a Dutch IMBY approach to renewable energy</td>
</tr>
<tr>
<td>TEHE117100</td>
<td>GROW</td>
<td>Gentle Driving of Piles</td>
</tr>
<tr>
<td>TEWZ117001</td>
<td>ECN</td>
<td>Large Offshore Wind Harmonics Mitigation</td>
</tr>
<tr>
<td>TEWZ117003</td>
<td>Microbial Analysis B.V.</td>
<td>MICrisk</td>
</tr>
<tr>
<td>TEWZ117004</td>
<td>Jules Dock Development B.V.</td>
<td>Integral Design of Light Weight Tower</td>
</tr>
<tr>
<td>TEWZ117005</td>
<td>MARIN</td>
<td>Cable JIP</td>
</tr>
<tr>
<td>TEWZ117007</td>
<td>ECN</td>
<td>Vortex wake models in wind turbine design</td>
</tr>
<tr>
<td>TEWZ117008</td>
<td>ECN</td>
<td>Wind Turbine Brain</td>
</tr>
<tr>
<td>TEWZ117010</td>
<td>MARIN</td>
<td>Offshore Maintenance JIP II</td>
</tr>
<tr>
<td>TEWZ117013</td>
<td>Temporary Works Design B.V.</td>
<td>MCPG: Motion Compensated Pile Gripper</td>
</tr>
<tr>
<td>TEWZ117014</td>
<td>Offshore Wind Logistics B.V.</td>
<td>3D Motion Compensation for Installation and Maintenance of large offshore wind turbine generators</td>
</tr>
</tbody>
</table>
## R&D in 2018

<table>
<thead>
<tr>
<th>Code</th>
<th>Organization</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDEIN18001</td>
<td>Two Towers B.V.</td>
<td>BWFS V</td>
</tr>
<tr>
<td>TEHE118004</td>
<td>Ge Renewable Holding B.V.</td>
<td>Demonstrator GE Haliade X - 12 MW offshore wind turbine</td>
</tr>
<tr>
<td>TEHE118006</td>
<td>Hydrautrans B.V.</td>
<td>Test of cups and pistons for the Hydrautrans Drive Train</td>
</tr>
<tr>
<td>TEHE118009</td>
<td>2-B Energy Holding B.V.</td>
<td>Step change in turbine capacity to meet 2030 cost reduction</td>
</tr>
<tr>
<td>TEHE118010</td>
<td>Temporary Works Design B.V.</td>
<td>MCPG: Motion Compensated Pile Gripper</td>
</tr>
<tr>
<td>TEHE118013</td>
<td>TNO</td>
<td>WINDCORE (WIND turbine COntrol strategies to reduce wind turbine blade Rain droplet Erosion)</td>
</tr>
<tr>
<td>TEHE118016</td>
<td>Tres4 B.V.</td>
<td>PMRB: Prefab Modular rotor blade root bushing for easier installing and increased reliability and durability of wind turbines</td>
</tr>
<tr>
<td>TEWZ118001</td>
<td>Technische Universiteit Delft</td>
<td>DCPM (Dynamic Cone Pressure Measurement)</td>
</tr>
<tr>
<td>TEWZ118005</td>
<td>TNO</td>
<td>WindTrue (WIND Turbine Rotor aeroelasticity Uncertainty quantification)</td>
</tr>
<tr>
<td>TEWZ118008</td>
<td>Universiteit Twente</td>
<td>InLEP (Integrated Leading Edge Protection for Offshore Wind Turbine Blades at High Speed)</td>
</tr>
<tr>
<td>TEWZ118011</td>
<td>Ampyx Power B.V.</td>
<td>Akka (Aerodynamic Knowledge Key for AWES)</td>
</tr>
<tr>
<td>TEWZ118012</td>
<td>Stichting Wageningen Research</td>
<td>Win-Wind (Collaboration, harvest potential and risk reduction of low-impact fisheries in offshore wind farms)</td>
</tr>
<tr>
<td>TEWZ118013</td>
<td>Ampyx Power B.V.</td>
<td>Daedalus (Design and testing of a Tether System for a Megawatt-scale Airborne Wind Energy System)</td>
</tr>
<tr>
<td>TEWZ118015</td>
<td>innogy Renewables Benelux B.V.</td>
<td>HyPE-ST (Hydraulic Pile Extraction – Scale Tests)</td>
</tr>
<tr>
<td>TEWZ118017</td>
<td>Stichting Wageningen Research</td>
<td>JIP ECO-FRIEND (ECO-Friendly reef restoration pilots in offshore wind farms)</td>
</tr>
</tbody>
</table>

https://projecten.topsectorenergie.nl/projecten
Want to know more?

• **Information on TSE subsidies**
  

• **Have your project idea tested**
  

• **Where to apply for subsidy**
  
  https://mijn.rvo.nl/

• **Subsidized projects**
  
  https://projecten.topsectorenergie.nl/projecten