



MEETING REPORT¹

Technical University Delft *"Schools as Energy Embassies"*

**During visit by the Directorate-General of New Renewal Energy and
Energy Conservation, Ministry of Energy and Mineral Resources
of the Republic of Indonesia**

**Faculty of Technology, Policy and Management
Technical University Delft
3 May 2019; 14:45-16:00 CET**

Background and purpose

From 3 May until 5 May 2019, the Secretary of the Directorate-General (DG) of New Renewable Energy and Energy Conservation of the Indonesian Ministry of Energy and Mineral Resources visited Delft, The Netherlands. On the first day, a meeting was held at the Technical University (TU) Delft where the university shared information concerning its project often referred to as *"Schools as Energy Embassies"*. Besides information sharing, the purpose of the meeting was to explore opportunities for a partnership between the Netherlands and Indonesia in the context of energy transition. The meeting focused particularly on the area of education and research.

The meeting was initiated by Yanti Kusumanto, TYK research & action consulting, in collaboration with the Faculty of Technology, Policy and Management (TPM) TU Delft, the Energy Academy Indonesia (Ecadin) and the Energy Commission of the Global Indonesian Students Association (PPI).

Time, venue and participants

The meeting took place Friday, 3 May 2019 at 14:45-16:00 CET at TPM, TU Delft and were attended by 21 persons: the Secretary of above-mentioned DG, representatives of TPM, TU Delft; of NWO (Netherlands Scientific Organization); Technotrend Foundation, The Netherlands; Ecadin; Energy Commission of Global PPI; Akuo Energy, Indonesia; KOPENTINDO Energy Cooperative/METI, Indonesia; Radiant Utama, Indonesia; Lentara Bumi Nusantara NGO, Indonesia; Houben Mobility, The Netherlands; Indonesia Nederland Society; TYK research & action consulting, The Netherlands and Indonesian students from various Dutch universities (see attached List of Attendees). Yanti Kusumanto moderated the meeting.

¹ Noted by: Yanti Kusumanto, TYK research & action consulting

Meeting

After a short introduction by Yanti Kusumanto, Dr. Thomas Hoppe, Associate Professor of TPM, TU Delft and Ms. Jimmy Mulkens of Technotrend Foundation shared some key information on the “Schools as Energy Embassies” project (please see attached presentation). This inter-disciplinary project started implementation by mid-2018 and has been collaboratively implemented by TU Delft, Technotrend Foundation and Energy-U in the Amsterdam and Utrecht region. Finance has been provided by RVO (Netherlands Enterprise Agency) for two years (please see: <https://www.delta.tudelft.nl/article/rvo-supports-schools-energy-embassies-project>). The action research project aims to accelerate the energy transition at local levels by seeking effective methods for such acceleration and by developing best practices for implementation by schools and other local parties. TU Delft is responsible for the research part of the project in building a better understanding of societal complexities and for developing support systems which enable an effective energy transition at local levels. Technotrend Foundation and Energy-U are responsible for project implementation in partnership with eight schools, pupils, parents, civil society organisations and local businesses.

Dr. Arina Schrier of NWO shared information about a new “*Cooperation Indonesia-The Netherlands programme*”, collaboratively developed by NWO and the Indonesian Ministry of Research, Technology and Higher Education—RISTEKDIKTI (please see attached presentation)); the presentation is attached . The programme focuses on the renewable energy theme for implementation in Indonesia. Details associated with procedures, requirements, and deadlines of proposal submission can be found on NWO’s website (for a pre-announcement, please see: <https://www.nwo.nl/en/news-and-events/news/2019/04/advance-notice-cooperation-indonesia-the-netherlands-call-2019.html>). Dr. Schrier advises that for interested parties it is key to identify early-on relevant Indonesian and Dutch partners that would become part a project consortium.

Q&A and discussion with the audience on the “*Schools as Energy Embassies*” project revolved around the design, objectives and implementation of the action research. Another issue discussed, was the question in what way this project differs from HIVOS’ renewable energy initiative implemented on Sumba island. It is obvious that TU Delft’s project is an action research aimed at building understanding of the societal complexities wherein the energy transition process is embedded. Based on the scientific knowledge that is built, methods and support systems can be developed to enable an effective energy transition at local and community levels. Differently, HIVOS’ project is a development project aimed at enhancing the adoption of renewable energy by local communities.

During Q&A related to NWO’s presentation, Dr. Schrier suggested that for identifying project partners, a long-distance match-making process (e.g. through tele-conference) could be an effective way of communication. Another point of discussion, is NWO’s idea to introduce some form of ‘collaborative or shared project lead’ for project implementation. A concern was raised by the audience whether a shared or collaborative project lead would be realistic given cultural differences. They advised that such kind of shared project lead should be given careful attention to, both during project design as well as implementation.

Previous NWO's calls in partnership with RISTEKDIKTI required the involvement of Indonesian researchers who were selected by RISTEKDIKTI for their eligibility to be part of the project. Many Indonesians valued such policy as being exclusive and open only to those researchers selected beforehand by the ministry. Furthermore, such a selection of researchers had led in some concrete situations to a lack of particular scientific disciplines which were considered necessary for given projects. Under the present Call, this policy is not applied anymore.

Yanti Kusumanto wrapped-up the meeting by suggesting that for a replication of the Schools as Energy Embassies project, an exploration would be needed. In particular, for identifying the necessary adjustments of the Dutch project into the Indonesian context. Such exploration could be facilitated, for example, by TYK research & action consulting, Ecadin and TU Delft.

After the meeting and in light of a recently set-up Young-led Climate Partnership, some exchange took place between Ms. Jimmy Mulkens and Yanti Kusumanto in looking for possibilities to:

- Set-up an excursion for young people and other interested parties to visit a "School as Energy Embassy" or partake in a workshop set-up for schools;
- To have pupils/students of "Energy Embassies" participate in COP25 in Chile.

ATTACHMENT A: LIST OF ATTENDEES

No.	Name	Affiliation
1	Aditya Farhan Arif	PT Rekayasa Industri, Indonesia
2	Anita Trisiah	Faculty of Technology, Policy & Management (TBM), Delft Technical University
3	Arina Schrier	Netherlands Scientific Organization (NWO)
4	Avianto Nugroho	Kiel University, Energy Commission Global Indonesian Students Association (PPI)
5	Desti Alkano	Energy Academy Indonesia (Ecadin)
6	Gatot	Directorate-General New Renewable Energy & Energy Conservation, Ministry of Energy & Mineral Resources
7	Grace Triana Perananangin	Delft Technical University, Energy Commission Global PPI/Lentara Bumi Nusantara NGO
8	Halim Sari Wardana	Directorate-General New Renewable Energy & Energy Conservation, Ministry of Energy & Mineral Resources
9	Ichsan	Koperasi Energi Terbarukan Indonesia (KOPENTINDO), METI
10	Jeanne Swensky Ligte	PPI America-Europa
11	Jimmy Mulkens	Technotrend Foundation and the Amsterdam Institute for Advanced Urban Solutions (AMS)
12	Kunaifi	University of Twente, PPI Twente
13	Maaïke Spiekerman	Netherlands Scientific Organization (NWO)
14	Monica Bouwman	Indonesia Nederland Society
15	Refi Kunaefi	Akuo Energy Indonesia
16	Richard Houben	Houben Mobility, The Netherlands
17	Shirley Houben-Stekkinger	Houben Mobility, The Netherlands
18	Sofwan Farisyi	Radiant Utama
19	Thomas Hoppe	Faculty of Technology, Policy & Management (TBM), Delft Technical University
20	Yanti Kusumanto	TYK research & action consulting, The Netherlands
21	Zaki Almuzaki	University of Groningen

ATTACHMENT B: PRESENTATION TU DELFT

Schools as energy embassies in neighborhoods

Presentation of project TU Delft – Stichting Technotrend

Dr. Thomas Hoppe

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Faculty of Technology Policy and Management

Delft University of Technology

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Netherlands Enterprise Agency



1

Schools and energy transition

- Schools can take an important role in spurring energy transition.
- Pupils are educated about sustainability, 'environmental literacy', '21st century skills' and conservation behavior like energy savings.
 - Pupils can also enthuse their parents to engage in environmental friendly behaviors.
- School buildings can be used to install solar panels, heat pumps (etc.) or adopt energy saving equipment, and serve as a (visible) landmark in neighborhoods.
- Schools also form social hubs in neighborhoods.
 - Neighborhood residents have children at school and meet each other in walk in-events at school.



2

Research goals

- To develop a methodology with schools contributing to energy transition at the neighborhood level.
- To use action research as key intervention.
- To educate pupils in an active way, with action research and outreach to neighborhood stakeholders.
- To establish 'energy embassies' in schools, which allows for generation of low carbon initiatives, with local stakeholder co-creation.
 - Also influenced by pupils engaging in environmental education and school management involvement.
- To eventually generate low carbon project in neighborhoods that contribute to lowering carbon emissions.

3

Research questions

Main research question:

- *How can schools contribute to generating low carbon initiatives in neighborhoods using action research as an intervention?*

Selection of related sub questions

- What does a school as 'energy embassy' mean in practice and how is it organized?
- How does the action perspectives of the school look like?
- How are schools as energy embassies experienced?
- What low carbon initiatives are generated conceived by schools as energy embassies?
- How and under what conditions can schools contribute to energy transition?

4

Research approach

- Project lasts two years: 2018-2019
 - First phase: exploration (2018)
 - Three schools involved
 - Second phase: testing the intervention (2019)
 - Five schools involved
- Location: Utrecht and Amsterdam
- With steering group (+ meetings)
- With learning community (+ meetings)
 - Business, government, industry.

5

Methodology

Per school

- Exploratory interviews with stakeholders
- Drafting of case narratives
- Action research and environmental education with pupils
- Focus group workshops with stakeholders
 - Generation of initiatives
 - Support of initiatives
 - Monitoring and evaluation
 - Stakeholder survey; pupils survey.

6

Preliminary results

Initiatives taken:

- Pupils active as 'energizers' in energy saving campaigns.
- Pupils active as 'energy leakage detectives'.
- 6 teachers have experience with 'energy embassies'.
- Neighborhood actions organised to mobilise households in neighborhoods.
- Waste/litter reduction campaign started.
- Cooking workshops initiated.
- Solar park initiative started.
- 17 business and other organisations involved.

Of great importance!

Research team:

- **Stichting Technotrend**
 - 5 staff members implementing research and supportive actions
- **TU Delft**
 - 2 research staff members supporting and designing research, and analysis
 - 4 students (in Master's and bachelor's assignments).
- **Workshops by action research specialist**
 - 7 Senses

Contact

- Patrick van der Hofstad (project leader)
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- Thomas Hoppe (TU Delft)
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ATTACHMENT C: PRESENTATION NWO



International policy NWO: Open to the World

- NWO Talent Programme : open to all researchers world wide
- Money follows Cooperation
- Participation in Horizon 2020 / Horizon Europe
- Bilateral research programmes with Brasil, China, India, **Indonesia**, South-Africa: **Merian fund**.



Context of Cooperation Merian Fund

Agreement 2019- 2023:

RISTEKDIKTI (Indonesian Ministry for Research, Technology and Higher Education)

NWO (funding organisation for scientific research at Dutch universities and research institutes)

National Agenda's Indonesia
Expertise Indonesia



National Agenda's Netherlands
Expertise Netherlands

Annual Theme
Call for proposals
Submission of proposals
Joint review process



Call for proposals 2019

- **Renewable Energy**
 - New Sources of Energy
 - Renewable Energy such as Geothermal, Wind, Solar
- **Consortia**
 - Indonesian Researchers
 - Dutch Researchers
 - Company
 - Relevant societal party (such as NGO, not-for-profit)
- Pre-announcement on the web: <https://www.nwo.nl/en/news-and-events/news/2019/04/advance-notice-cooperation-indonesia-the-netherlands-call-2019.html>
- Call for proposals end of May
- Letter of intend mid July
- Deadline submissions end August
- Start projects first half 2020





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