

Minutes of the 6th WG4 meeting

Participants

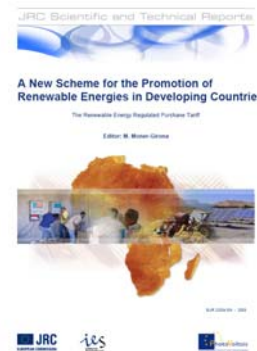
Hubert Aulich (HA), Eleni Despotou (ED), Marthe Djuikon (MD), Francis Feraux (FF), Paula Llamas (PL), Magda Moner (MM), Simon Rolland (SR), Anjali Shanker (AS), Xavier Vallvé (XV), Michel Vandenberghe (MV), Wilfried van Sark (WV).

Welcome – H. Aulich

- The next EUPV Platform general assembly will take place on 6th June in Ljubljana, Slovenia. WG 4 has been asked to present concrete proposals concerning Photovoltaics and Development issues.
- In the last EUPV Platform steering committee the progress of the WG4 was discussed. WG4 has been asked to propose **strategic recommendation for EC** concerning Photovoltaics in Developing Countries (see Final Discussions section).

Status of the Report on Renewable energy regulated purchase tariff – M. Moner

- M. Moner presented the final version of the WG4 report on the RPT scheme for Developing Countries. The main aim of the report is the divulgation of the "adapted FiT" scheme for mini-grids in Developing countries. The report will be published as EC report (April 2008) basically aimed (together with the brochure) as policy-support documents to attract policy-makers attention in RE deployment. The RPT scheme offers to energy and development stakeholders an alternative subsidy-scheme to support electrification in village-scale mini-grid. The scheme is already attractive but still many aspects of the structure remains undetermined. The good-performance of several pilot cases is needed to broaden the concept.



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- The background of the report is based in the discussions of the WG4 on the new Scheme for RET Promotion in Developing Countries (see presentation and final report for detailed information).

Status Brochure WG4 on Renewable energy regulated purchase tariff – P. Llamas

- P. Llamas presented the last draft for the RPT leaflet. The main aim of the brochure is the marketing of the RPT model for policymakers. The participants suggested few changes. The final version with the changes will be printed in the following weeks.
- ARE has included the concept of RPT in a proposal of hybrid systems in North Africa.



PV minigrid for the village Darsilami in the Gambia– M. Vandenberg

- M. Vandenberg updated the technical status of the Darsilami hybrid system after their visit to the village in February 2008 and described the different scenarios for the extension of the grid. The proposed concept consist in combining generators in a minigrid with:
 - Minigrid ownership: village co-operative
 - PV financing: regulated purchase tariff
 - Prepayment meters
- See his presentation for further details.

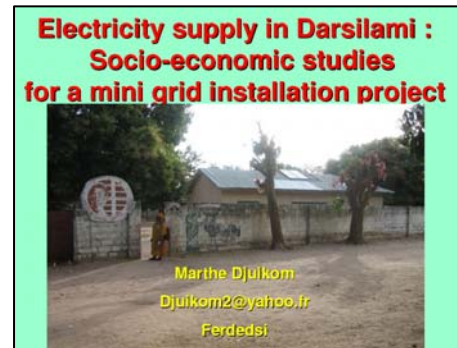


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Socio-economic situation in Darsilami. M. Djuikom (Ferdedsi-NGO)

- M. Djuikom presented the socio-economic studies for the mini-grid project in Darsilami. Ferdedsi has met with the main stakeholders involved in the project and has performed a detailed household survey in order to understand the current situation for energy uses in Darsilami.
- The Survey at the household level focused on: General information on households, household's energy needs and cost and willingness and ability to pay for electricity service. The tariff that the villagers are already paying is very high. Villagers are willing to pay high tariff for electricity (especially category 1). See her presentation for further details.



Regulated Tariff for rural electrification in Ecuador– X. Vallvé

- X. Vallvé presented the status and the possibilities of the implementation of the regulated FiT for rural electrification in Ecuador. There are two levels for the success of the implementation of a new renewable energy scheme:
 - The support at high level of government
 - The success of several pilot cases
- CONOLEC approved a resolution that regulates the tariff where the non-interconnected systems are also included. In Ecuador, there is already the existing framework opened to FiT for PV and other renewables and a new grant of 2000\$ per new user connected. The table contains the FiT tariffs for different technologies (i.e PV 52 cents in mainland...57 island).



CENTRALES	PRECIO (cUSD/kWh) Territorio Continental	PRECIO (cUSD/kWh) Territorio Insular de Galápagos
EOLICAS	9,39	12,21
FOTOVOLTAICAS	52,04	57,24
BIOMASA Y BIOGAS	9,67	10,64
GEOTERMICAS	9,28	10,21
PEQUEÑAS CENTRALES HIDROELECTRICAS HASTA 5 MW	5,80	6,38
PEQUEÑAS CENTRALES HIDROELECTRICAS MAYORES A 5 MW HASTA 10 MW	5,00	5,50

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- TTA organized a workshop with CONELEC held in Ecuador in February 2008. CONELEC has passed the “new” objectives for rural and urban marginal electrification (31-01-2008) but it does not include the FiT Resolution 009-06. TTA has had internal discussions within CONELEC board (and Ministry for Electricity) about the possibilities of metering system for stand-alone schemes, remote metering concept, and the “Feed-in” rates levels – their opinion is that FiT are too low.
- Further demonstration also required:
 - Data analysis of existing small micro grid demo projects (ie San Lorenzo).
 - New demo projects to validate yield evaluation methodology
- Questions discussed: Who collects the money who pays? Ownership of the grid? There is a strong need of a clear transaction model.
- See his presentation for further details.

Potential of renewables regulated purchase tariff in Ecuador – W. van Sark.

- W. van Sark presented the current status for rural electrification and the potential of a regulated purchase tariff to promote renewable energies electrification of isolated areas in Ecuador based on the field research of M. Solano in Ecuador.
- The options for hybrid systems are wide: Currently dozens of small communities are running on mini-grid diesel gensets. Possibility to install PV/diesel hybrid systems in some communities where currently diesel gensets are providing electricity
- Regarding the status of the FiT Regulation has not been implemented appropriately, it is still not clear who should make the payment (supposedly CENACE). In the case of rural electrification, investment costs are already covered by FERUM funds.
- Willingness to pay by users ranges from \$3-\$10 per month (approx. 0.30\$-0.50\$/kWh), which are higher than the ones paid by city dwellers (0.10\$/kWh)



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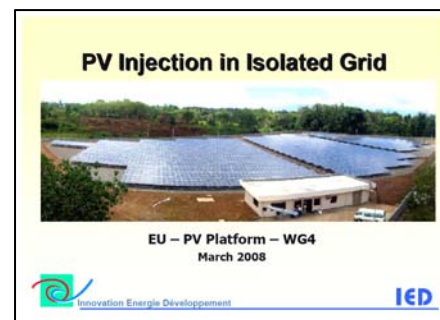
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- Combination of current subsidy with RPT. RPT can be useful, because it will secure the follow-up of organisation, ministry, Electricity Company of the project and would avoid failures.
- For further information, see his presentation.

Status of project in Mauritania – A. Shanker

- A. Shanker presented feasibility studies to inject PV electricity into an already existing isolated grid run by diesel gensets in Mauritania.
- The utilities in Saharan area have diesel mini-grids and at the moment their priority is to minimise initial cost and maximise the number of beneficiaries. The idea is to integrate PV in a diesel minigrd by reducing fuel consumption but without reducing the genset size bringing a major benefit. The simplest option with no storage has been taken for this study. PV contributes to the baseload shaving thermal production peak.
- IED has been contracted for the rehabilitation of the diesel units but at the moment local Utilities are not convinced about PV however SOMELEC has mandated IED to mobilise funds for PV hybrids. The question is the financing scheme. The Utility are state-own, cross-subsidies are possible?
- For further information, see her presentation.
- IED is organizing a workshop in Mali the 8th April with presence of UNDP, ARE, and ISET



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■ **Final Discussions:**

-The concept of RPT can make RET projects economically feasible and RPT scheme might support to make new PV business. The main barrier is the institutional framework. What make it complicated is to locally define National the framework and find out the appropriate international community that could regulate the tariffs (HA).

-A new concept that might also be applied: The owner gets paid by a tariff based on the calculated/forecasted consumption (XV).

-In Capo Verde has been proposed a half concept RPT half concept to capital investment. How much money do you need from subsidy that you can make profitable and part investment is recuperated. (XV)

-Are green certified appropriate/compatible for RE electricity production? (MV)

-RPT is a good concept to insurance the guarantee but still needs a well-designed regulation scheme that makes it possible (MM).

-Under concrete circumstances PV is the cheapest option in isolated areas, is already cost-effective. The PV most important facto for a successful implementation is the collateralization arrangements (XV).

■ **Strategic recommendation for EC in terms of PV and developing countries**

1. Building awareness of renewables in local countries. Reinforce PV hybrid option as an appropriate solution for rural electrification.

2. Need of large demonstration programmes with better definition of priority areas

3. A guarantee Fund is needed (better defined that GEEREF). Strong need to adapt new financial schemes.

■ **Previous tasks. Allocation of new tasks - H. Aulich**

Not discussed

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