

PROJECT No.:
LLP-LdV-TOI-2008-HU-007



WP 6 Sustainability Strategy

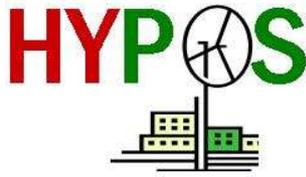
“Hungarian Distance Learning Training Structure on the Design and Operation of Hybrid Power Systems”

20. September 2010

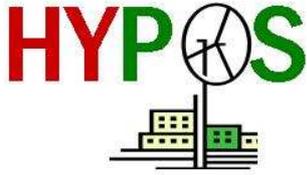
Elaborated by:

Mag. Dipl.-Oec. Gordana Draskovic

BLUEWATERS, Environmental Consultants



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INTRODUCTION

The major project objective was to strengthen Hungarian energy expertise related to the technologies and best practices in renewable energy sector – with emphasis on hybrid power systems (HPS) – by providing a nationalised distance learning programme, specialised training programme for two target groups, designed to be as flexible as possible to meet the training needs and requirements of both the participants as well as the target market.

The target groups were defined based on their educational background and practical knowledge:

Planners of HPS: people with a university-entrance level of education in a technology-related discipline (e.g. consultants, energy planners, policy makers, etc.)

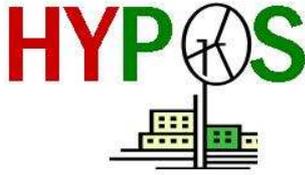
Designers of HPS: post-graduates with an engineering background (e.g. decision makers, engineers working in power production and distribution, and the technical staff of local and regional energy agencies)

This is an essential requirement to enable the HPS related industry, which involves both RES and conventional technologies, to follow the consistently high standards of design, operation and monitoring expected by a fast growing commercial market.

During the project phase two curricula from the project HYPOS-DILETR were adapted to the Hungarian market requirements keeping in mind the results of the needs analysis carried out among the representatives of the two defined target groups. The curriculum has been tested during the pilot course held at the Szent Istvan University which enabled the partners to gather valuable feedback from the practice.

The project partnership is strongly interested in commercial usage and further development of the project results after the pilot phase.

This strategy paper provides an overview of various valorisation schemes incl. ideas about the accreditation of the training programme which have been delivered by the partners in the HUN-HYPOS project.



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1 OVERALL POST-PROJECT STRATEGY

The post-project strategy has been elaborated jointly by the project partners based on the principles of valorisation. According to the definition of the Leonardo da Vinci Lifelong Learning Programme valorisation is a new strategy to disseminate the results of projects. It is more than transfer or dissemination, because of two new aspects:

In order to optimise the value of project results and enhance their impact, it is necessary to integrate the results into training systems and practices at local, national, and European level.

In order to spread the project results, it also seems to be necessary to commercialise the products of projects.

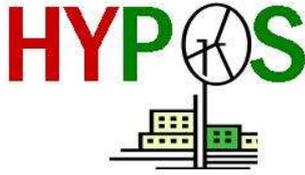
Accordingly, during the project the partners in HUN-HYPOS identified three possible valorisation paths as results of the development of the modules and programmes:

Providing (certified, accredited) vocational training on two levels organised around three thematic modules

Learning materials (project outcomes) can be sold to interested universities and VET-institutions that would provide the course

Incorporating HUN-HYPOS learning programme into existing education programme of the participating universities, BME and Szent Istvan

In the following chapters, risks and chances of each of the above mentioned options will be briefly explained.



2 LEGAL BACKGROUND

3.1 Higher-level educational training

The high-level vocational education - provided for learners, due to the agreement between the learners and the high level education institutes - embedded in the basic high education institutional system, enables a certificate of OKJ (Hungarian national Qualification Register), in accordance with the Law on high education, 2005, CXXXIX, § 147.

To provide a higher-level vocational training, the organisation has to fulfil the following criteria :

provided course on the appropriate training area at least at the basic level

Existing registered vocational training, which meets the professional and the examination requirements

tool catalog must fit with the professional examination requirements

Staff, equipment and organisational capacity

High-level vocational institute must have formal entitlement to provide higher-level vocational training (Government Regulation 79/2006. (IV.5.) of Act CXXXIX. of 2005 on Higher Education)

3.2 Postgraduate specialist education

The postgraduate specialist education is an educational form in the higher education, which is based on the completed education at the bachelor/master level. Upon completion of the postgraduate specialist education a certificate will be obtained.

The postgraduate specialist training course is a training which does not provide additional formal qualification but it is ensuring further specialisation qualification.

(Act LXXX. of 1993 Törvény)

The postgraduate specialist training courses provide an option of a further education for the graduate. The training provides theoretical and practical knowledge and is organised for small-groups and gives a significant competitive advantage to graduates at the labour market.

This type of certificate is nationally recognised and valued by the employers.

The regulation of OKM about the general conditions for the organisation of vocational training (10/2006. (IX.25.) sets the right of establishment of the vocational training course into the own sphere of competence of the institutes; upon prior registration in the Higher Education Registration Centre as well as publication of the curriculum of the vocational training course at the institutional homepage.

Nationally recognised basic training (previous college degree) or master degree (earlier university degree) is necessary for participation in the postgraduate specialist training course.

(Regulation 10/2006. (IX.25) 2. § (1) by OKM)

3 QUALITY ASSURANCE

In order to meet the Hungarian national accreditation requirements the partners will develop a joint strategy for preparation of the necessary steps for the accreditation.

4.1 Accreditation in general

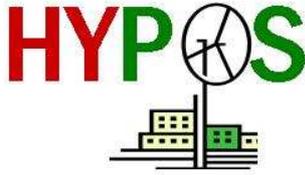
HUN-HYPOS accreditation can be based on the accreditation of the participating Universities Szent Istvan and Technical University Budapest as well as accreditation of the national accreditation body which would allow interested third parties, e.g. vocational training institutions, to offer the programme to the participants.

4.2 Quality assurance and sustainability

Looking at the accreditation procedures, quality assurance and sustainability aspects are more and more important.

For these purposes it is advisable for the HUN-HYPOS partnership to undertake the following steps in the future:

Build a multidisciplinary network with the institutions for maintaining and updating the learning programme and to develop international reputation



Founding an alumni-network

Continuous information dissemination – organisation of national and international seminars, conferences etc. for students, trainers, employers, (future) employees and other stakeholders in order to broaden the target groups

Continuous maintenance of the learning programme (trends and updates) and networking with trainers and lecturers

Moreover, one of the important aspects of accreditation will be the image/status which the certificates and diplomas of the HUN-HYPOS programmes will deserve in the future.

4 FUTURE VALORISATION STRATEGIES – ACCREDITATION, IPR AND RISKS

In chapter 2 an overview of the five options, services and possible activities after the project, as the result of the cooperation in the last few years has been given. The partners can decide that the cooperation could be continued jointly to valorise the given options or could do it individually.

In the following text short overview of various options is given.

5.1 Option 1: Providing vocational training on two levels

This option would include provision of a vocational training for the two previously defined target groups. The trainings would be organised around the three thematic areas by the partners themselves:

Hybrid power systems and their characteristics

Power generation options

Design of HPS and economic impact

4.1.1 Option 1: Accreditation

Accreditation of either single modules or of the whole programme can be carried out in all partners' countries by the national accreditation body in charge. There is also an option to provide a personal certification.

If the national accreditation body is a member of the EU-organisation ENQA, there will be a possibility in the near future to have the HUN-HYPOS programmes in an EU-register.

4.1.2 Option 1: Intellectual property rights

The IPR of the programme is contracted to be owned by HNI Kft with both the National Agency and the HUN-HYPOS partners. In order to increase the recognisability of the programme and protect the name and trade mark HUN-HYPOS (name and logo) can be EU-registered.

By building a network with important organisations, in the labour market and within the EU (i.e. in Brussels), it will be possible to have a specific status in a few years.

4.1.3 Option 1: Risks

The risks according to the certification and accreditation are low. There will be costs for the accreditation of the programmes; however the education institutions can combine the accreditation with the regular procedures in their own country. Personal certification will require additional costs.

There are always risks that other institutions will use the programme developed by the partners in HUN-HYPOS. The official registration of the name (to be used by the official partners) will prevent from misuse.

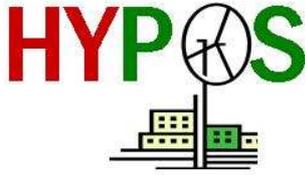
5.2 Option 2: Selling learning materials to external universities/educational institutions

This option aims at commercial usage of the elaborated learning materials and the learning platform by selling them to interested universities and educational institutions.

4.1.4 5.2.1 Option 2: Accreditation

The partner universities can use the own accreditation, based on the procedures in Hungary. Another university can buy a programme, and offer it to students as part of their study programme, if they can get an own accreditation.

If the other university does not have own accreditation, it can use the accreditation of the universities, partners in HUN-HYPOS, that would assure the necessary quality.



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4.1.5 5.2.2

Option 2: Intellectual property rights

The interested university has to sign a contract with the HUN-HYPOS partners in order to buy the right for using the learning materials. A fee for the right to use the programme would be charged. The contract would give the new university the right to use the programme for a limited period of time after which the contract should be renewed.

4.1.6 5.2.3

Option 2: Risks

The risk in the case of the described option is low. Of course, there is a threat that the new university will use an own version of the programme, after a couple of years. However the university is not able to use the registered name and logo.

5.3 Option 3: Incorporating HUN-HYPOS into existing educational programmes of the participating universities

The participating universities (Szent Istvan and Budapest Technical University) can offer the HUN-HYPOS training in the framework of their existing educational programmes; e.g. as master programme upon completion of the bachelor study.

4.1.7 5.3.1

Option 3: Accreditation

In the case of the option 3, the accreditation is possible based on the accreditation of the whole master programme. The quality of the HUN-HYPOS programme can be assured by using the HUN-HYPOS project results and the existing accreditation of the university itself.

4.1.8 5.3.2

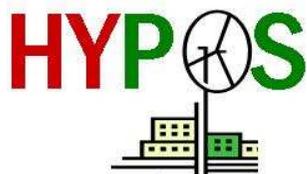
Option 3: Intellectual property rights

The IPRs are protected by the partner university and its accreditation.

4.1.9 5.3.3

Option 3: Risks

Implementation of the HUN-HYPOS modules in an own educational programme does not have any important relevant risks for the partner universities.



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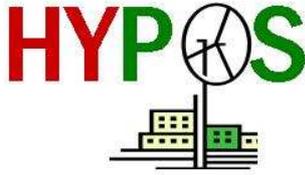


5 BUSINESS PLAN

As the HUN-HYPOS programme has been tailor made for the Hungarian labour market and will be run by Coordinator; therefore a separate business plan is developed by Coordinator, the calculations are based on assumptions related to Hungary.

The Business Plan developed for Hun-Hypos educational program in Hungary is calculating the below expected costs and incomes for both courses:

INCOME	Unit
Exam and course fee	Per course participants
Costs	Unit
Investment cost	unit
Further development (Phase 1)	lump sum
Further development (After 3 years)	lump sum
Accreditation procedure	lump sum
Training start-up, calibration of trainers	lump sum
Operational cost	
Space (webservice)	yearly
Computer rooms	rent/day
Equipment	lump sum/year/course
Manuals	lump sum/module
Personnel	
General manager	gross salary/ month, incl. payments by employer
Secretary	gross salary / month, incl. payments by employer
Trainers (also indicate number of days)	daily fees, including per diem
Trainers exam fee/day	daily fees, including per diem
Marketing and sales	lump sum/a
Quality Assurance (QA)	
Costs for QA, incl. yearly audits	lump sum/a



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6 SUSTAINABILITY OF THE PROGRAMME

Beside the previously described valorisation strategies which are based on accredited post-secondary vocational training the partnership envisages further strategic options to ensure the sustainability of the project results. The focus of the post-project activities will lie on development of further target groups and markets.

Furthermore, the coordinator is running Ecocentre – competence and education centre. Therefore, this option will be used for positioning of the HUN-HYPOS curriculum as well.

7.1 Expansion of target groups

Initial target groups were defined as follows:

HPS technology designer are professionals and students; also university degree holders, of the professional engineering courses, whereas the fields of professions could also be agriculture, waste management, economics and mechanical sciences.

The system planner level candidate should understand all alternative energy systems and their range of product-cycles; however the technological knowledge is not a must. Therefore, economists, logistic managers, finance managers, regional economics experts, experts employed by the public bodies, politicians, public utility companies etc. Are as well qualified to participate in the course as they can immediately apply the knowledge they gain from the project in their everyday work.

Due to the modular structure the elaborated curriculum provides high level of flexibility which enables its application to other target groups. These are in the first place:

local governments and decision makers involved in energy questions

employees of micro-regional associations and programme offices involved in the writing and support of project proposals related to energy issues

manufacturers, distributors and developing engineers of systems utilising renewable energies

6.1.1 Strategic approach to reach further target groups

A set of strategic approaches toward alternative target groups has been elaborated by the partners or the post-project phase. It includes:

- continuous maintenance of the website,
- direct communication,
- dissemination of information materials and newsletters,
- lobbying and networking,
- appearances at professional fairs, seminars, symposiums, discussion rounds etc.

The activities will be carried out by all partners jointly with the goal to create sustainable demand for the elaborated learning programme and the project outputs.

7.2 Transfer of learning programme to other markets

The partnership has discussed the possibility of transferring the developed programme to other European countries with energetic potentials however without currently existing tailor made programmes related to design and implementation of hybrid power systems (for example Bulgaria). This option could be realised jointly by applying for financing within a subsequent Leonardo da Vinci Transfer of Innovation project in 2011 or 2012.

The SEE region (Croatia, Serbia, Bosnia, Macedonia and Albania) as well has a large potential for valorisation of project results. As the SEE countries are not applicable for Leonardo da Vinci scheme for the financing of this option other European sources of financing will have to be defined; e.g. research programmes like FP7, various development programmes etc..

7.3 Ecocentre – competence and education centre in Hungary, Hatvan

Professional consultation days and the final exams will be held in the Ecocenter Education and competence centre in Hatvan, run by Coordinator. The Educational program is defined in the separate Hun-Hypos Business Plan developed by the Coordinator

