

Action Fiche for Jordan

1. IDENTIFICATION

Title/Number	Renewable energy and energy efficiency Programme in Jordan (ENPI/2011/022-721)		
Total cost	EU contribution: EUR 35 million		
Aid method / Method of implementation	Sector Policy Support Programme (SPSP): - Sector budget support (centralised management); - Project mode (centralised and partially decentralised).		
DAC-code	23030	Sector	Energy

2. RATIONALE AND COUNTRY CONTEXT

2.1. Country context and rationale for SPSP

2.1.1. *Economic and social situation and poverty analysis*

Jordan has been adversely affected by the global and regional economic crisis. However, prudent fiscal and monetary management has minimized the effects of these external shocks on the domestic economy. Jordan's population growth rate has declined in recent years and is currently 2.3%. Real Gross Domestic Product (GDP) per capita has grown by 4-5% per year over the past decade. The percentage of those who live on less than USD 1 a day in Jordan has been now reduced to less than 1%. Despite developmental problems brought about by the global financial crisis, Jordan succeeded in capping and slightly reducing the absolute poverty rate from 14.2% in 2002 to 13.3% in 2008. According to Jordan's Department of Statistics, almost 13% of the economically active Jordanian population residing in Jordan was unemployed in 2008, although unofficial estimates cite a higher unemployment rate. Unemployment among the youth (including graduates) and women remains a major challenge.

2.1.2. *National development policy*

The National Agenda (2006-2015) is the guiding document for the national development policy and strategy. Its main objective is to improve the quality of life of Jordanians through the creation of income-generating opportunities, the improvement of standards of living, and the guarantee of social welfare. In terms of energy, the National Agenda refers to the challenges facing Jordan as a big importer of energy, with oil and gas imports making up around 20% of its GDP. Energy demand growth is projected at 4% yearly for electricity, and 3% yearly for oil products towards 2020, which is another challenge.

2.2. Sector context: policies and challenges

Sector context: While Jordan depends on imports for 96% of its primary energy requirements, renewable energy provides a minimal contribution to energy supply: solar water heating is officially estimated at 1.6% of total primary energy requirements. Hydroelectricity, biogas, solar and wind energy altogether contribute

to 0.5% of electricity generation, or 0.2% of primary energy supply. Present hydropower installed capacity (10 megawatt (MW)) is close to the total potential of available sites (except the Red Sea-Dead Sea project, which would offer a 400-800 MW capacity). But other forms of renewable energy have an attractive potential (i.e. wind energy; solar potential; electricity generation and hot and geothermal springs). Energy consumers in all economic sectors have made limited efforts to save energy and improve energy efficiency related productivity. High energy saving potentials have been identified by the government of Jordan in all sectors: commercial sector 20%, industrial 20% – 40%, residential 20%, transport 20%, street lighting 30%, and water pumping (irrigation, drink water) 30%. Virtually no investment to combine heat (steam) and electricity generation has been undertaken, particularly in industry, because of low electricity tariffs and lack of other incentives. As a result, the energy intensity of the Jordanian economy for the year 2009 is 0.38 toe (tonnes of oil equivalent) per USD 1,000 of GDP, compared with 0.1 in most EU Member States.

A Renewable Energy and Energy Efficiency Temporary Law was passed in February 2010, which deals with two issues: i) conditions under which electricity generating facilities based on renewable energy can be financed, constructed and connected to the grid, and ii) creation of a Renewable Energy and Energy Efficiency fund (JREEEF).

This EU programme is in line with the EU-Jordan Action Plans and particularly with the latest one, which reflects the advanced status of Jordan and where energy is clearly identified as a key sector for partnership and networking within the region.

The programme is coherent with the priorities set down in the Joint Communication of 8 March 2011 of the European Commission and the High Representative of the Union for Foreign Affairs and Security Policy, entitled "A Partnership for Democracy and Shared Prosperity with the Southern Mediterranean". It provides a strong focus in sustainable and inclusive growth, economic development and support to Small and Medium Enterprises (SMEs), priorities set out in the communication.

The policy dialogue under this programme will be inclusive (state and non state actors), and will feed into the regular sector review in the framework of the programme steering committee as well as the EU-Jordanian sub-committee on energy, environment and transport; with emphasis on renewable energy and energy efficiency applications.

Sector Budget and its medium term financial perspectives: The 2007-2020 energy strategy foresees investments in the range of USD 13-17 billion to cover the diversified sources of energy, out of which USD 1.5-2 billion to cover renewable energy investments to reach the 10% target set by the strategy for 2020. Public budget spending in the energy sector is minimal, compared to the contributions to the GDP of the electricity, oil and gas sectors; public budget expenditure dedicated to the development of renewable energy and to energy efficiency improvements needed by Jordan economy is negligible, compared to the impact of fossil fuels imports (11.8% of GDP in 2009, 18-19% in 2006-2008). According to the Jordanian General Budget Department, current public expenditure in the sector is around Jordanian Dinar (JOD) 16 million on running cost and JOD 47 million for capital cost, covering the cost of different institutions linked to the sector and energy sources. The government

is planning to introduce soon a Medium-Term Expenditure Framework (MTEF) for the main sectors, including the energy sector.

Performance monitoring: The Ministry of Energy and Mineral Resources is aware of the budget support context, since it has already different support programmes with different donors, and is familiar with the use of performance monitoring and performance measurement as a means for determining disbursement on budget support programmes. The extension of the monitoring and evaluation capacity of the energy sector has emerged in the last few years as a major priority for the Ministry of energy and mineral resources. Currently, the ministry is undertaking a review of the structures and functions, followed by a review of the processes, roles and responsibilities of the Ministry and of the different Regulatory commissions who monitor the energy sector development.

Assessment of institutional capacity: The government understood the need to set up instruments to be able to impose new norms, induce changes in behaviours and encourage investment in renewable energy and energy efficiency. In this respect, two institutions are in place and have already acquired strong experience in these areas, but need further support: the Ministry of Energy and Mineral Resources itself and the National Research Centre / Energy Programme (NRC/Energy). A new institution, the Jordan Renewable Energy and Energy Efficiency Fund (JREEEF) is also being established, and commitments have been made to provide financial support for large grid-connected renewable energy investments.

Macroeconomic framework: Jordan has been also affected by the international financial crisis and economic slowdown experienced in the world economy since 2009, although less than other countries. Its pace of economic growth was significantly reduced, from 7½% in 2008 to 2½% in 2009 (International Monetary Fund (IMF) Article IV Consultations 2010 updated figures). Due to this decline in growth and a shortfall in external grants, pressures on the fiscal position intensified in 2009 and the budget deficit rose to 8.8% of GDP including grant aid and 12.5% excluding grant aid, at the beginning of 2010. This widening of fiscal imbalances occurred despite vigorous efforts taken by the authorities to reduce spending in the second half of 2009, by limiting current spending and applying large cuts to capital spending. Consequently, the Ministry of Finance maintained its stringent fiscal policy adopted since beginning of 2010 to address the overall deficit, and reduce it by 1% each year to reach 3% of GDP at the end of the next 5 year period.

Public Finance Management (PFM): With the support of the EU, through two ongoing budget support programmes, the government has made considerable progress in advancing PFM reforms, in particular in the fields of debt management, external scrutiny, audit, financial reporting and transparency. Furthermore, progress was made in creating a formal cash flow mechanism that aims at providing cash revenue forecasts on a weekly basis and improving coordination between the Treasury and revenue collecting agencies.

2.3. Eligibility for budget support

Jordan continues to be eligible for Sector Budget Support (SBS) and is also expected to maintain these conditions during the implementation of the present programme. The conclusions on the three eligibility criteria for budget support follow:

- The analysis of the sector policy set out above confirms that a strategy dedicated to the development of renewable energy and energy efficiency, responding to the challenges and problems faced by Jordan, has been defined. The proposed sector policy is an appropriate basis for the provision of EU sector budget support.
- Satisfactory progress in maintaining a policy of macro-economic stability has been continuously achieved, as evidenced by the latest IMF Article IV Consultation report released in September 2010.
- Satisfactory progress in the area of PFM is attested by the latest PFM Annual Monitoring Report, which was prepared by the EU Delegation to Jordan in November 2010.

The satisfaction of the three criteria above shows that Jordan continues to be a strong candidate for SBS operations.

2.4. Lessons learnt

Jordan's energy policies, particularly related to the development of renewable energy and energy efficiency, are regularly debated in various forums, including regional programmes funded by the EU; these include the Euro-Mediterranean energy partnership and the EU Mashrek natural gas programme. As part of these programmes, specific reviews and reports were produced for Jordan, highlighting the achievements as well as current issues, and pointing to reform priorities and expected initiatives. An Energy Efficiency (EE) Roadmap for Jordan was written by a group of officials from the Ministry of Energy and Mineral Resources, the NRC/Energy, the Ministry of Planning and International Co-operation and the Ministry of Environment, with the support of donors and external consultants. This energy efficiency Roadmap builds upon the National Energy Strategy of 2007 and the World Bank's Energy Efficiency Framework for Jordan 2009. Through this document, the Ministry of Energy and Mineral Resources recognises that "currently, there are almost no policies to mandate or encourage energy efficiency, such as benchmarking of energy consumption in certain industries, enforcement of regulations to reduce energy consumption in buildings, and labelling of machinery, equipment and appliances to facilitate customer choice based on energy efficiency." The energy efficiency Roadmap recommends the introduction of mandatory regulations and standards, the creation of tax and financial incentives to mobilise energy consumers and investors and provision of adequate information to the public. Regarding institutional aspects, this document recommends the creation of an Energy Efficiency Office (EEO). The energy efficiency Roadmap clearly states that this EEO should not be an implementation body. EEO's responsibilities are clearly defined: coordinate national energy efficiency action plans with all stakeholders; suggest programmes and activities; follow up, monitoring and evaluation; report to higher levels within the Ministry of Energy and Mineral Resources. In fact, its responsibilities should not differ from those of the existing Alternative Energy and Energy Efficiency Department of the Ministry of Energy and Mineral Resources, or from what this department should do; therefore, the EEO does not need to be established outside of the Ministry of Energy and Mineral Resources, except if it can facilitate recruitment of capable staff.

2.5. Complementary actions

Ministry of Energy and Mineral Resources, NRC/Energy and JREEEF are the beneficiaries of various institutional support projects, such as:

- An EU funded Capacity Building project for the National Research Centre (NRC) (Energy programme), in the form of a twinning agreement with its Greek counterpart Centre for Renewable Energy Studies, was completed in 2009. It covered wind energy, photovoltaic energy efficiency and photovoltaic laboratory accreditation.
- The EU also provided/provides important support to other Jordanian energy sector institutions, including the Electricity Regulatory Commission (ERC), and the Nuclear Regulatory Commission on nuclear safety (EUR 1 million financing agreement was signed in July 2009).
- A financing agreement was signed on 31 May 2010 for the EUR 10 million EU-funded project "Capacity-Building in Wind Energy and Concentrating Solar Power (CSP)", with NRC as the main counterpart; its main objective is to install and test pilot wind energy and CSP facilities and to help the country build up local and regional expertise in the field.
- Geothermal resources are being studied by the Natural Resources Authority and NRC, which has a small co-operation agreement with Darmstadt University (Germany).
- A building draft thermal code is being developed by the Ministry of Public Works and Housing, with limited resources and so far some exchange with essentially the UK, Japan and the USA.
- A pilot programme on lighting in residential buildings and public lighting is being implemented with *Agence Française de Développement* financing (EUR 0.3-0.4 million).
- The EU has financed regional projects Med-Enec I and II, which have achieved some visibility but have generated limited concrete projects in Jordan.
- The EU regional programme "Euro-Mediterranean Energy Market Integration Project" (MED-EMIP) has also given a good support in Jordan part of which touching on renewable energy and energy efficiency.
- The latest EU programme: "Paving the way for the Mediterranean Solar plan" is the new EU funded regional project assisting the Mediterranean Partner Countries to contribute to a significant increase in deployment of sustainable energy systems based on renewable energy sources.
- Support to Cooperation between the Euro-Mediterranean Energy Regulators Project (**MEDREG II**). The project aims at strengthening cooperation between the EU energy regulators and those of the Mediterranean Partner Countries helping them to develop a modern and efficient regulatory framework.

2.6. Donor coordination

A donor-government working group on energy is chaired by the Ministry of Planning and International Co-operation; a need to enhance coordination in this field is however necessary, especially with the latest developments in this sector during

2010. A clear consensus among different Jordanian administrations and institutions involved in renewable energy /energy efficiency related policies and future reforms would also be beneficial to attract and optimise foreign support.

The activities foreseen in the present programme will be closely coordinated with the Jordanian Authorities and other relevant international donors and organisations. For each one of the activities listed below, the likely complementarities with other projects are indicated.

3. DESCRIPTION

3.1. Objectives

The general objective of the programme is to contribute to the development and implementation of effective policies which will enable Jordan reaching the renewable energy and energy efficiency goals set by the government for 2020.

The programme has two specific objectives:

- To assist the government in completing the already undertaken institutional and legislative reforms, in order to create the enabling environment for public and private actors to achieve the goals of 10% energy from renewable sources and 20% of energy savings by 2020. It is also to develop appropriate regime in Jordan for enabling the introduction of right initiatives that will help infrastructure development for renewable energies.
- To contribute to full scale implementation of activities foreseen in the government strategy, in order to induce behavioural changes in the society and to foster investments towards the in-country production of energy.

3.2. Expected results and main activities

The main activities include:

- Institutional Technical Assistance to the Ministry of Energy and Mineral Resources, NRC/Energy and JREEEF as well as other related institutions.
- Support and monitor wind and solar investments, as a supplement to the EU funded project “Capacity-Building in Wind Energy and CSP”: resource measurement, testing, demonstration, technical and economic studies, training, taking into consideration the involvement of Small and Medium Size Enterprises (SMEs).
- Implement demonstration projects and related activities in the fields of bio-energy (bio-mass and bio-gas), taking into consideration the involvement of Small and Medium Size Enterprises (SMEs).
- Support the thermal code development: the standardisation process has been initiated by the National Building Council (NBC) under the Ministry of Public Works and Housing, but according to international experience it is likely that this process will take from 5 to 10 years, as it requires continuous co-operation with all parties involved and feedback from actual implementation.
- Advise the NBC on solutions to promote and enforce thermal building regulation and standards.

- Support academic institutions and research centres in developing activities related to renewable energy and energy efficiency in the construction sector.
- Awareness campaign and debates on energy efficiency and renewable energies allowing proper involvement of the civil societies in the process.

Accordingly, the programme will have two main components:

- *Sector Budget Support*: This component will support the government measures related to the development of renewable energy and the promotion of energy efficiency.
- *Project support*: This component aims to build the capacity of key public institutions such as the Ministry of Energy and Mineral Resources, NRC/Energy and JREEEF and provide assistance to support the development of renewable energy and energy efficiency. This component will also provide grants for renewable energy and energy efficiency demonstration projects in buildings which will be pilots to set a base for best practices to facilitate a full implementation of the renewable energy and energy efficiency strategies for Jordan.

The expected results of this programme include the following:

- Sustainable renewable energy and energy efficiency strategies, with detailed budgeted action plans and activities and an accurate assessment of their impacts, have been elaborated and approved by the government, including the legal and regulatory framework.
- The Ministry of Energy and Mineral Resources has a renewable energy/energy efficiency department capable of elaborating the renewable energy and energy efficiency detailed strategies and budgeted action plans mentioned above, and including their plan to attract investments in this field.
- The National Research Centre NRC/Energy is functional and enforced, and will act as a technical arm for the Ministry of Energy and Mineral Resources and JREEEF.
- Public awareness and mobilisation in Jordan about energy efficiency and renewable energies is raised.
- Legislation and a code on energy efficient buildings have been elaborated.
- Institutes and laboratories involved in standardisation and equipment testing have received adequate complementary equipment.
- Demonstration projects in existing and new buildings have been implemented.
- Wind and solar investments have received adequate support (e.g. fiscal incentives) from the government institutions and are closely monitored.
- Demonstration projects and related activities in the fields of bio-energy (biomass and biogas), cogeneration and geothermal energy have been implemented, and are followed by further industrial development.
- Project outputs are complimentary to EU regional energy programmes and all synergies among these programmes are made clear and reflected on Jordan's renewable energy and energy efficiency Strategy and action plans.

3.3. Risks and assumptions

Assumptions

It is assumed that this budget support programme will have the expected leveraging effect on the expected government investments in the sector, and that it will provide a sufficient incentive and capacity for the government to strengthen the Ministry of Energy and Mineral Resources, the NRC/Energy and to establish the JREEEF. It is also assumed that the execution of this budget support instrument will be based on the experience acquired by the different Jordanian ministries with previous similar programmes. It is assumed that the government, namely the Ministry of Public Works and Housing and the authorities responsible for delivering permits, will be able to enact the new thermal building code and to enforce it, thereby creating incentives for project promoters in public, residential and commercial sectors to submit projects following the call for proposals for demonstration projects.

Risks

Regarding demonstration projects, the risk of overspending with limited results is minimal, as subsidies will be disbursed only when renewable energy and energy efficiency investments have been properly implemented and have been duly monitored. The technical assistance component will be geared to assist project promoters and professionals during the implementation phases.

The main risk for the whole programme is that the political will for the necessary reform and ensuing investments is not pursued, and therefore institutions remain in their present status: the Ministry of Energy and Mineral Resources would keep a very small unit responsible for renewable energy and energy efficiency; the government would not enforce the role of NRC/Energy as a renewable energy/energy efficiency Centre to take the responsibility for technical oriented actions; JREEEF might have funds but no strategy to act in specific renewable energy and energy efficiency areas. This might be the result of administrative, budgetary and/or parliamentary constraints.

3.4. Stakeholders

The main stakeholders for this programme include:

- (i) the government and related institutions: Ministry of Energy and Mineral Resources, NRC/Energy, JREEEF, the Ministry of Planning and International Co-operation, the Ministry of Public Works and Housing, National Building Council, the Ministry of Environment, ERC and Jordan Institute for Standards and Metrology.
- (ii) Academic institutions and universities, which will participate in some activities.
- (iii) Small and medium enterprises and investors who will benefit from the establishment of the new financing facilities, industrial and commercial enterprises, and their professional associations.
- (iv) Technical centres and
- (v) civil society.

A Programme Steering committee will be established and meet in order to hold in - depth dialogue on the progress, achievements, challenges of the government's renewable energy and energy efficiency strategies and the results achieved under this programme. The Steering Committee will undertake this review in due time to feed

into the relevant ENP subcommittee and progress report exercises. The Steering Committee members will include the above-mentioned stakeholders.

3.5. Crosscutting Issues

Sustainable energy is the main scope of the programme, which will contribute to demonstrate to the public that environmentally friendly and decentralised solutions can work. The whole programme will have positive impacts on climate change (this has been quantified in 3.2). Finally, the programme may also have positive impacts on water management, reduction of soils and air pollution, and biodiversity. The programme will also contribute to the introduction or strengthening of standards and metrology in Jordan. As for good governance and human rights, the programme can set a good example of how the government administrations can help the public to understand and implement new behaviours and projects.

4. IMPLEMENTATION ISSUES

The programme will be implemented through a combination of Budget and Project Support modalities.

4.1. Method of implementation

Direct centralised management is the implementation method of the Sector Budget Support component.

The project support component will be implemented through centralised and through partial decentralised management. A Financing Agreement will be signed with the Government of Jordan in accordance with Articles 53c and 56 of the Financial Regulation

The contracts implementing the sub-component " renewable energy/energy efficiency demonstration projects in buildings" shall be concluded by the Beneficiary. The contracts implementing the other sub-components (technical assistance, visibility, audit and evaluation contracts) shall be concluded by the European Commission on behalf of the Beneficiary.

The Commission controls ex ante all the procurement procedures except in cases where programme estimates are applied, under which the Commission applies ex ante control for procurement contracts > EUR 50,000 and may apply ex post for procurement contracts ≤ EUR 50,000. The Commission controls ex ante the contracting procedures for all grant contracts. Payments are executed by the Commission except in cases where programmes estimates are applied, under which payments are executed by the beneficiary country for operating costs and contracts up to the ceilings indicated in the table below.

The Responsible Authorising Officer ensures that, by using the model of financing agreement for decentralised management, the segregation of duties between the authorising officer and the accounting officer or of the equivalent functions within the delegated entity will be effective, so that the decentralisation of the payments can be carried out for contracts up to the ceilings specified below:

Works	Supplies	Services	Grants
< EUR 300,000	< EUR 150,000	< EUR 200,000	≤ EUR 100,000

The change of management mode constitutes a substantial change except where the Commission "re-centralises" or reduces the level of tasks previously delegated to the beneficiary country.

4.2. Procurement and grant award procedures

1) Contracts

All contracts implementing the action must be awarded and implemented in accordance with the procedures and standard documents laid down and published by the Commission for the implementation of external operations, in force at the time of the launch of the procedure in question. Participation in the award of contracts for the present action shall be open to all natural and legal persons covered by the ENPI⁹ regulation. Further extensions of this participation to other natural or legal persons by the concerned authorising officer shall be subject to the conditions provided for in art. 21(7) of the ENPI Regulation.

2) Specific rules for grants

The essential selection and award criteria for the award of grants are laid down in the Practical Guide to contract procedures for EU external actions. They are established in accordance with the principles set out in Title VI 'Grants' of the Financial Regulation applicable to the general budget. When derogations to these principles are applied, they shall be justified, in particular in the following cases:

- Financing in full (derogation to the principle of co-financing): the maximum possible rate of co-financing for grants is 80%. Full financing may only be applied in the cases provided for in Article 253 of the Commission Regulation (EC, Euratom) No. 2342/2002 of 23 December 2002 laying down detailed rules for the implementation of the Financial Regulation applicable to the general budget of the European Union.
- Derogation to the principle of non-retroactivity: a grant may be awarded for an action which has already begun only if the applicant can demonstrate the need to start the action before the grant is awarded, in accordance with Article 112 of the Financial Regulation applicable to the general budget of the European Union.

(3) Specific rules on programme estimates:

All programme estimates must respect the procedures and standard documents laid down by the Commission, in force at the time of the adoption of the programme estimates in question (i.e. the Practical Guide to procedures for programme estimates).

4.3. Indicative budget and calendar

The overall budget of this programme is EUR 35 million, out of which EUR 29 million is in the form of Sector Budget Support and EUR 6 million in the form of complementary support (see table below with indicative amounts). With regards to the budget support component of EUR 29 million, four tranches are indicatively foreseen. The operational duration foreseen is 48 months from the signature of the Financing Agreement.

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Regulation (EC) No 1638/2006 of the European Parliament and of the Council of 24 October 2006 laying down general provisions establishing a European Neighbourhood and Partnership Instrument, OJ L 310 of 9/11/2006.

Indicative Budget Breakdown

Component	Implementation Mode	Total amount (EUR million)
Budget Support	Centralised	29
Capacity Building, Support to renewable energy/energy efficiency development (mainly Technical Assistance)	Centralised	2
Renewable energy/energy efficiency demonstration projects in buildings (grants)	Decentralised	3
Audit, evaluation and visibility	Centralised	0.6
Contingencies	Centralised	0.4
TOTAL		35

4.4. Performance monitoring and criteria for disbursement

The performance evaluation preceding the disbursement of the tranches will be undertaken by the European Commission through monitoring missions, mobilised twice a year. Each year, a first mission will review the progress of the programme, ensure that it is on track and that the actions to take to meet the following reform benchmarks are well understood by all stakeholders. The second mission will undertake the detailed performance monitoring of the general and specific reform benchmarks for that year.

4.5. Evaluation and audit

The European Commission will carry out a final evaluation of the programme. The European Commission may also carry out a mid-term evaluation if deemed necessary. Both evaluations will be carried out by independent consultants recruited directly by the Commission under specific Terms of Reference. All contracts passed under the complementary support components will be subject to audits, according to the terms to be detailed in those contracts.

4.6. Communication and visibility

The necessary visibility, public relations and publicising activities will be undertaken to ensure that the programme will raise the awareness of specific or general audiences of the reasons for the actions, for the EU support for the actions, as well as the results and the impact of this support. To this end, appropriate use will be made of the "Communication and Visibility Manual for EU External Actions" available at http://ec.europa.eu/europeaid/work/visibility/index_en.htm.