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ANNEX 4

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Action Document for “Fostering Reforms in the Egyptian Renewable Energy and Water Sectors through Developing Capacity Building”

1. Title/basic act/ CRIS number	Fostering Reforms in the Egyptian Renewable Energy and Water Sectors through Developing Capacity Building CRIS number: ENI/2015 / 038-275 financed under the European Neighbourhood Instrument			
2. Zone benefiting from the action/location	Egypt.			
3. Programming document	Egypt-EU Single Support Framework and Multi-Annual Indicative Programme (2014-2015)			
4. Sector of concentration/ thematic area	Improved quality of life and the environment			
5. Amounts concerned	Total estimated cost: EUR 8 million.			
6. Aid modalities and implementation modalities	Project Modality Direct management: Procurement of services.			
7. DAC code(s)	31120 Agricultural development 31140 Agricultural water resources 23068 Renewable Energy			
8. Markers (from CRIS DAC form)	General policy objective	Not targeted	Significant objective	Main objective
	Participation development/good governance	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Aid to environment	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Gender equality (including Women In Development)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Trade Development	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Reproductive, Maternal, New born and child health	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	RIO Convention markers	Not targeted	Significant objective	Main objective
	Biological diversity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Combat desertification	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Climate change mitigation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Climate change adaptation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. Global Public Goods and Challenges (GPGC) thematic flagships	N/A			

SUMMARY:

This project aims to support the ongoing reform process of two key sectors of the Egyptian economy, **the water and renewable energy sectors**. The specific objective is to contribute to improve the management and the use of these resources by improving operational efficiencies of concerned stakeholders and beneficiaries.

The project is in line with EU-SSF third pillar of intervention for Egypt, *Quality of life and environment*. In particular, the project will contribute to enhancing and building capacities in water and energy, through availing adequate support for the Ministry of Electricity and Renewable Energy and the Ministry of Water Resources and Irrigation as well as the institutions working under their respective umbrellas.

The EU is contributing with grants to different infrastructure projects in energy and water, implemented by the European International Financial Institutions. The EU has also traditionally played an important role in supporting the reforms of these two sectors through budget support operations. In view of the challenges these sectors are facing, maintaining EU at the forefront of the national sector policy dialogue is of strategic importance. Indeed, such approach will constitute an important platform for policy dialogue in two crucial sectors of the Egyptian economy and will sustain other EU investments.

In the framework of this action activities will cover support to the government in fields related to continuing institutional and legislative reforms, financial sustainability, proposing new schemes for maintenance and operation of infrastructure, communication and awareness raising, technical capacity building as well as technical studies as means of investments prioritisation.

This support will mobilise, to the extent possible, relevant expertise of EU Member States in corresponding fields to share experience and know-how. The Total budget for this action amounts to EUR 8 million. This project will be implemented in a direct management.

1 CONTEXT

1.1 Sector/Country/Regional context/Thematic area

Water and Energy are essential to Egypt's ability to achieve sustainable development and provide adequate quality of life and satisfy the needs of its increasing population. Current physical development planning policy until 2052¹ depends on water and energy infrastructure. The Egyptian Government is endeavouring to create synergies through the integration of water and energy policies, planning and management,

¹ The National Urban Planning Strategy developed by the General Organisation for Physical Planning (GOPP) <http://gopp.gov.eg/plans/>.

while encouraging conservation, motivate innovation and ensure sustainable use of water and energy.

However, Egypt is exposed to numerous challenges. Today the country has severe deficits in its resources of energy and water. Overexploitation and lower precipitation patterns due to climate change threaten the balance of water available for agriculture and development. At the same time, fossil fuels are becoming a less viable source of energy, due to depletion, cost, and environmental damage. In fact, both sectors face similar challenges such as scarcity of resources, heavy subsidies, high investment cost, weak management, need for strengthened institutional reforms and coordination, as well as operation and maintenance challenges.

Egypt is experiencing one of its most serious energy crises for decades. Parts of its own natural gas reserves, most of which are used as combustible in combined cycle power plants, were exported at marked-down prices. It still has untapped gas fields, but these have traditionally been mined by foreign companies which are currently reluctant to extract more until they are paid overdue debts owed by the Egyptian government. This in turn has led to a crisis in availing gas to power plants, in addition to other problems such as lack of proper maintenance of the different plants, due to the revolutions and an unstable social background over the last 3 years. Therefore, the country has a current estimated shortage of 3000 MW according to the Ministry of Electricity and renewable Energy. The gap between supply and demand will worsen with the expected increase in GDP in the coming years based on faster economic development. This is currently pushing the government to search for immediate solutions such as allowing some industries to use coal to secure energy supply. Meanwhile, large coal fired power plants option is seriously considered with a number of investors from the Gulf already proposing such projects on PPP to the Government based on Chinese technology. These challenges should be overcome through a combination of reductions (and eventual elimination) of energy subsidies combined with institutional reforms over the next 5 years, together with broadening the variety of energy sources in the Egyptian energy mix. It is clear that the deployment of Renewable Energies is part of the solution although not the least costly one. Due to the level of subsidies in Egypt the gap between the prices of conventional types of energy and renewables, making the use of renewable energy expensive, this is particularly true for wind energy.

In the Water Sector, current water deficit reaches up to 18 Billion Cubic Meters per year (30% of its water resources), which is mainly covered in irrigation by reuse of agricultural drainage water through mixing stations, or illegal direct reuse of drainage water for irrigation that have a significant bad impact on health and environmental conditions. Water-use efficiency is low, due to high water losses: the efficiency of field irrigation systems is estimated at only 50%. As for drinking water, the average inhabitant of Egypt uses around 300 litres of per day (based on a total intake of 9.2 Bm³/year)². In a wet country like the Netherlands the average water use per person has come down to only 120 litres per day, whereas the unaccounted for water is less than 5%. Awareness is therefore one of the key issues to change this wasteful behaviour and saving precious resources.³ As for sanitation, from 2009,

² According to HCWW design criteria of 350 l/c/d for urban populations and 200 l/c/d for rural population, 84 million inhabitants in 2010, and average 32% unaccounted for water.

³ From: State of Water in Egypt 2009-2010, Ministry of Water Resources and Irrigation, November 2013.

total needs for sanitary sewer services reached 21 million m³ daily, while the current sanitary sewer services capacity is 13.7 million m³ daily, representing 65% of the required capacity. The main challenge is expanding the sanitary sewer coverage in rural areas to reach 100% of the villages. In agriculture the increasing scarcity of water, is exacerbated by poor water quality, while organic and chemical pollution of water has reached alarming levels. Poor management in irrigation and drainage techniques and the overuse of chemical inputs have largely contributed to the environmental degradation of agricultural areas. Improper waste disposal has also become a national problem in Egypt as well as an issue of debate and conflict at local and national levels. For small landholders income from agricultural activities is not sufficient to meet their needs.

1.1.1 Public Policy Assessment and EU Policy Framework

Following the Egyptian Economic Conference that took place in March 2015, it became even more obvious that the government's emphasis will be put on water and energy related infrastructure development.

In the **Energy Sector**, and in order to satisfy the increasing electricity demand, the installed capacity needs to increase rapidly to a level of almost four times the 33 GW currently installed. The Egyptian Energy Strategy is being updated until 2035 with the support of a Technical Assistance provided by the European Union in the framework of the Energy Sector Policy Support Programme. The updated strategy that should shortly be approved by the Egyptian Authorities includes different scenarios for an energy mix and a medium term action plan. The least cost scenario in the strategy foresees a renewable energy share of 30% (49% from only wind) of the Egyptian energy mix in 2035. The share of wind in the installed capacity reaches 16% by 2035, the share of PVs is close to 9% and the share of Concentrated Solar Power (CSP) is limited to around 2%. The government takes the view that a more diverse energy mix provides more security as the country will be less vulnerable to fluctuations in the availability of any fuel. Moreover, KfW is carrying out an EU funded (under the Neighbourhood Investment Facility –NIF) master plan for renewable energy which confirms the amount of Renewable Energy Sources (RES) in the mix. This Master plan is currently being discussed by the Egyptian Government. A white book based on the updated overall national energy strategy and a medium term action plan to translate the renewable energy master plan is being finalised.

In the **Water Sector**, the Government of Egypt's is already taking many measures to cover the increasing water requirements related to the rise in population and the improvement of living standards as well as the expansion of agricultural land. The objective is better use of existing resources, improving water reuse techniques, enhanced management of existing irrigation and drainage. Additional measures aim to properly plan an integrated management of water resources, taking many different aspects into consideration such as water resources, water requirements of the various sectors, and water quality. This has already been addressed in the preparation of the Egypt National Water Resources Plan for Egypt 2017-2037 (**currently funded by the EU**). As for urban water and sanitation, the amount required to finance the full coverage is of 150 billion EGP (close to EUR 18 Billion) and it is expected to require three 5-years plans to complete this task. The integrated Master plan prepared by the HCWW (**funded by the EU**), includes providing water to 500 villages sanitary sewer utilities, roads, schools, sanitary utilities, services, social programs, training on development skills, micro loans, and investments of industries and private sector

companies. However, after almost two years, the first phase included only 150 villages where some infrastructure was improved.

1.1.2 *Stakeholder analysis*

The main beneficiary of this action **in the energy sector** will be the **New and Renewable Energy Authority (NREA)**, which operates under the umbrella of the **Egyptian Ministry of Electricity and Renewable Energy**. NREA was established in 1996 as a state authority responsible for supporting and developing renewable energies and for planning and implementing projects in the field. NREA is a focal point for knowledge and technical expertise in the field of renewable energies in Egypt. It generates own revenues mainly from the feed-in fees for wind energy paid by the Egyptian Electricity Transmission Company (EETC), as well as from research and development assignments. It can freely dispose of the funds allocated to it in the budget, using them to cover the running expenses associated with operating its own wind farms, but any surplus must be transferred to the Ministry of Finance.

Other institutions involved in the planning, implementation, monitoring and evaluation of the process related to Renewable Energies include the Egyptian Electricity Holding Company (**EEHC**), the Egyptian Electricity Transmission Company (**EETC**), the Electricity Distribution Companies, the Electricity Regulator, Egyptian Organization for Standardization, the Private Public Partnership Unit at the Ministry of Finance, the Ministry of Investments, the General Authority For Investments, the Ministry of Education and Universities as well as the Ministry of Environment. The project will certainly sustain and build on the close ties and links created in the past between the government on one side and the private sector and non-governmental organizations on the other. Such organisation working in the field of energy efficiency, renewable energy promotion and raising awareness will certainly benefit from the policy dialogue platform created in the framework of the present initiative.

In the Water Sector, the **Ministry of Water Resources and Irrigation (MWRI)** is in charge of water resource development and distribution and plans and implements water resources development projects, including the River Nile, surface water, and groundwater and drainage water. It undertakes construction, operation and maintenance of irrigation and drainage network and is responsible for the basic infrastructure and pumping stations in new agricultural lands. The ministry is also responsible for studies and research through the National Water Resources Centre.

The other main public entity for drainage issues is the **Egyptian Public Authority for Drainage Projects (EPADP)**. EPADP is a public authority under the MWRI, established in 1973 by Presidential Decree No. 158. It is vested with power over the financial, technical and administrative aspects of implementation, operation and maintenance of drainage systems. Its activities involve field investigation, planning, designing and procurement of equipment for civil works, budgeting and operating budget accounts. The main features of EPADP's activities are surface and subsurface drainage projects, their maintenance and rehabilitation. While, the **drainage user associations (DUA)** are playing a role in decision making and the operation and maintenance of the local drains and flush pumps by themselves, with significant assistance from the Drainage unit staff. Farmers are informally organised to carry out simple maintenance work in pipe collector drainage schemes. DUAs have been active supporting implementation plans and preventing damage to the system once

installed. There are about 2,881 DUAs,. However, DUAs are struggling to survive, because they had no legal basis and, more importantly, they had too little to do.

The main institution involved in the urban water and sanitation sub sector is the **Ministry of Housing, Utilities and Urban Communities (MHUUC)**; MHUUC is concerned with Egypt's comprehensive urban, communal and economic development comprising housing, roads, bridges, potable water and sewerage plants. With regard to the Water and Sanitation sector MHUUC's responsibilities are the following:

- Implementation of the reform process;
- Securing financial resources for investments & operations, including PPP;
- Developing Policies, as well as clearance of legislation, regulations, decrees;
- Planning and programming of investment and O&M budgets;
- Facilitating tariff, staffing and debt management reforms;
- Establishing and supervision of Egyptian Water Regularity Agency (EWRA);
- Supervision of Holding Company for Water and Wastewater (HCWW);
- Supervision of National Organization for Potable Water and Sanitation (NOPWASD);
- Managing and coordinating the work plans among NOPWASD, HCWW, and EWRA.

In addition, MHUUC is responsible for setting rules, standards and technical specifications, control of execution and follow up of the design / execution / operation / management of potable water and sanitary drainage plans, projects and programs.

The Ministry of Environment has also been identified as a potential stakeholder as it has responsibilities on specific elements of water management.

1.1.3 Priority areas for support/problem analysis

While the Egyptian Government is planning for increasing its GDP in the coming years through adding massive public and private investments in different sectors of the economy, the country is facing a problem of water and energy supply, which could hamper its development.

It is clear that Egypt is both in a position and a need to exploit solar and wind energy for electricity generation. Furthermore, it is understood that there exists fundamental drivers for Egypt to pave a way towards producing electricity from renewable energy sources. However, significant challenges exist towards the large scale deployment of Renewable Energy (RES) technologies in the country.

The existing and planned support mechanisms form a more than adequate environment for the involvement of public and private sector in the development of RES projects in Egypt. Nevertheless, most of these mechanisms cannot work efficiently unless a stable and rational economic environment is established and the financial situation of the state-owned energy companies is drastically improved. The deployment of Renewable Energies and improving the demand side management are part of the Egyptian energy dilemma. Taking into account the level of subsidies in

Egypt the gap between the prices of conventional types of energy and renewables, wind and solar energies are still expensive.

The following measures are being taken by the government:

- Incentives to increase Renewable Energy capacity through a new Feed-in-tariff programme increase in electricity tariffs - as laid out in a 5 year plan;
- Gradual increase in gas tariffs over the same period;
- To increase greater private sector participation in the electricity sectors allowing power plants fired by different sources of energy to be constructed and operated to add to base-load and mid-merit capacity.

In the Water Sector, the need for innovative techniques for reuse of wastewater and drainage is a necessity as the country faces a huge deficit in its water resources. The development of agricultural land in Egypt suffers from waterlogging and salinity due to irregular use and overuse of irrigation water, low soil hydraulic conductivity, over-irrigation on newly reclaimed lands and intrusion of saline groundwater from the high lying lands to the old lands of the Nile Delta and Valley. Out of an irrigated area of 3,150,000 hectares, 1 million hectares would be affected by salinity and 600,000 hectares would be waterlogged. Agriculture remains the main activity in rural areas, representing 13.5% of the total Gross Domestic Product (GDP) and 18.3% of Egypt exports. It also employs more than 25% of the population and it is the main source of income for about 55%. For small landholders income from agricultural activities is not sufficient to meet their needs. As a consequence there is an increasing urgent need to support building the capacities within the MWRI, and final user bodies (Drainage Users Associations) to be closely involved in the implementation and management of the drainage sector, for better operation and maintenance of the network, thus increasing the agricultural production and improving rural incomes.

In the Urban water sector the current high water losses rate (35% of produced water, 2.8 Billion Cubic meters/year of treated water are lost) constitutes a heavy burden on top of an existing heavy debited and subsidised sector. Thus innovate measures to lower this percentage and increasing water usage efficiency is a must. However, none of the above challenges can be addressed unless an integrated national strategy is established and the financial situation of the state-owned Water Holding Company (HCWW) is improved. The deployment of decentralised rural sanitation strategies, sub-surface drainage, improved irrigation techniques, and improving the demand side management are part of the Egyptian water predicament. Taking into account the existing level of subsidies in Egypt the gap between the prices of the service delivery and existing tariff rates, the government has taken measures to gradually increase the tariffs in the sector, and increase private sector participation in the construction and operation of desalination, and wastewater treatment plants through PPP schemes.

The main issues currently facing the sector and addressed by the project are as follows:

In the Energy Sector the main challenges are:

Legislative, Institutional, economic and financial, mainly related to:

- Lack of good governance principles in the renewable energy sector
- Slow implementation of the institutional reforms in particular redefining the role of NREA and other public administration;

- Public funding constraints in conjunction with limited participation of the private sector;
- Low electricity prices compared to cost, which lead to limited cash generation within the market;
- High indebtedness of state entities dealing with RES development such as EEHC and NREA;
- Fiscal uncertainties.

Technological and institutional, mainly related to:

- the current limited experience for integration at a large scale of RES-E technologies in the Egyptian electricity system;
- Limited experience in operation, maintenance and in sustaining investment in Renewable Energies;
- The harsh environmental conditions under which solar and wind energy plants are expected to operate.

In the Water Sector the main challenges are:

- Egypt lacks the implementation of proven and countrywide transferable drainage reuse strategy, oriented to maximise water efficiency and related income generating activities;
- Improper implementation of hygiene activities at the level of rural areas considerably affects the health conditions of the population;
- Inadequate waste-water management (WWM) and citizens' access to sanitation, lacking participatory measures at local level and income generating activities;
- Little or no effective coordination mechanisms at field level between relevant agencies and other ministries and agencies potentially interested in water-related programs.

The above-mentioned challenges will be addressed in the framework of this project through support to continuing institutional and legislative reforms, enhancing the financial sustainability through reshaping the roles of the public bodies working in energy and water, maintenance and operation of infrastructure, communication and awareness raising, technical capacity building as well as pre-feasibility studies as means of investments prioritisation. Such steps would not be viable without putting in place the necessary accompanying legislative, institutional, sustainable financial reforms as well as through the provision of the needed capacity building.

In Egypt the EU is in the forefront of energy and water planning and development. The ongoing EU funded sector policy support programmes offer a real platform and opportunity for policy dialogue at national level. This project aims to continue and build on the existing achievements and success in this respect. Moreover, this project will provide the needed support to implement the agreed steps included in the strategic document geared towards the massive deployment of renewable energies and infrastructure throughout the country. The current project will also aim to support institutional capacity building to relevant governmental and non-governmental actors to establish and operate a sustainable demand-oriented and

cost covering wastewater system. This will allow as well pursuing the efforts already started at more general levels in the framework of the EU Sector Policy Support Operations.

2 RISKS AND ASSUMPTIONS

Risks	Risk level (H/M/L)	Mitigating measures
Weak coordination	M	The programme will strengthen coordination in the legislative reform, dialogue in energy and water by supporting the implementation of national strategies and mechanisms. The programme will also be focused on the needed institutional, legislative and financial sustainable reforms and solutions in renewable energies and the sustainable use of water which will lead to bringing about homogenous type of stakeholders ready and motivated to cooperate for the best interest of the country.
Insufficient ownership	L	Continuous dialogue with representatives of the concerned Ministries and Governorates during implementation: EU Delegation-led monitoring missions and high-level meetings as required. A Steering Committee including the involved Institutions will be set up at central level while local committees will be established at Governorates level to guarantee all the needed measures of coordination and coherence of implementation
Corruption and fraud	H	Overall risk for corruption and fraud in Egypt is considered substantial, as witnessed by low ranking of Egypt in international transparency and corruption perception rankings, high perceived corruption in population corruption surveys, a fragmented institutional framework of anti-corruption entities, incomplete legal framework and inconsistencies in judicial treatment of corruption cases. Procurement practice favours direct award. On the positive side government has adopted anti-corruption strategy and some streamlining of inspection agencies underway
Increased instability at country and/or regional level impacting	H	Instability is partly rooted in the lack of social and economic development prospects. The situation should improve thanks to the commitment of the Government, the alignment

negatively the political, social and economic conditions in which the project is implemented		of stakeholders around a development agenda and the successful Economic Development Conference organised in March 2015. The situation will be closely monitored by the EUD.
Sustainability Risk	M	Notwithstanding the fact that the Government started already addressing tariff structure reforms, tariffs remains below the economic cost of supply. These sector distortions contribute to high electricity and water demand, reduce the incentives for energy and water efficiency, hamper the development of renewable energies and sustainable use of water and would lead to an unsustainable financial position for the sectors. To mitigate this risk, the project will create a platform for information sharing and policy dialogue about ongoing reforms including adequacy of tariffs to meet the full cost of electricity supply and capital and operational cost of water infrastructure while further proposing tariff adjustments or other necessary financial measures to be applied.
Assumptions		
<ul style="list-style-type: none"> • All concerned authorities and stakeholders will collaborate during the programme's implementation • The social and economic development agenda, including energy and water strategies, is implemented by the Egyptian Authorities and is not halted due to social or political instability. • Momentum to strengthen inter-institutional co-operation as well as policy and regulatory reforms within the Government is maintained after Egypt's Economic Development Conference. • Policy dialogue with private sector and non-governmental organisations in energy and water sectors remains a priority. • A strong and stable senior management team at the concerned Egyptian authorities willing to collaborate in close cooperation with the TA expert. 		

3 LESSONS LEARNT, COMPLEMENTARITY AND CROSS-CUTTING ISSUES

3.1 Lessons learnt

The programme at hand will take stock of the European Union's wide experience in the field of delivering capacity building in Egypt, notably through the TA already provided to foster policy dialogue and accompany intuitional reforms in water and energy in the framework of the Energy and Water Sector Policy Support Programs. The support at hand will also be sustained by our current blending operations in the field of water and energy infrastructure, which contribute to the transfer of technology and know-how as well as availing innovative techniques in addressing challenges related to these sectors. This includes the good governance of the

technical assistance which takes the form of commitments from the Government of Egypt in nominating high level decision makers in the steering committees established to this effect. This was not the case in other technical assistance in the water and energy sectors which delayed the implementation of measures and reforms. The EU Delegation Staff will have hands on approach on the service delivery through the organisation of ad-hoc meetings with the Egyptian counterparts and the experts working on implementing the action and through insuring regular presence among the team of consultants.

The assistance to the Government of Egypt will be implemented, to the extent possible, through mobilising EU Member States expertise of institutions which have a large experience in implementing reforms in the relevant sectors through exchange of experiences in the relevant fields between European and Egyptian institutions. This could take the form of technical visits which will enhance knowledge and build ties in the energy and water sectors.

The contribution to the programme of specialised European institutions capable of delivering capacity building could as well be considered, as it could enhance the implementation of reforms. Indeed some highly specialised capacity development schemes can only be delivered by such institutions. It was not possible to hire such institutions in ongoing capacity building support (as sub-contracting was not authorized), which somehow limited the positive impact of the training delivered.

3.2 Complementarity, synergy and donor coordination

This requested TA will come as a continuation to what was achieved under the Budget Support **Sector Policy Support Programmes** in Energy and Water, in particular under the respective linked TA contracts. For instance, the national energy strategy was updated under the current Budget Support TA. It is therefore foreseen that the TA implemented under this programme will continue this support by assisting the government in implementing the part related to renewable energy in the strategy. In the case of the water sector, the required TA will build on the current TA and complement strategy development and capacity building activities in progress.

Supporting the reform through these TA and Capacity Building activities represents as well the complementary soft support needed to sustain **the ongoing and upcoming NIF Funded Investment projects** in energy and water by providing the needed support to related sector reforms and to foster policy dialogue. A number of blending operation are currently being implemented in both sectors such as wind farm projects and in the field of improving water and waste water services projects.

The main donors' coordination between donors and IFIs in the sector takes place in the framework of **Development Partner Group (DPG)** through the thematic groups on energy and environment and the, on water resources and irrigation, co-chaired by the EU. Both groups are very active and maintain a close policy dialogue with the government with respect to fostering implementation reforms in the concerned sectors.

The Energy Sector Policy Support Programme (ESPSP) amounting to EUR 60 million was signed in 2011. It aims to improve the energy policy and regulatory framework, the sector financial transparency and performance and to promote development of renewable energy sources energy efficiency.

A EUR 3 million technical assistance is provided in the framework of this programme to update the Egyptian Energy Strategy until 2035, to produce a white

book, to establish a gas regulator and a gas law. It also aims to strengthen the institutional capacity in the field of energy efficiency. A smaller contract is supporting the establishment of an energy information system.

A EUR 3 million **Renewable Energy and Energy Efficiency Master Plan** funded by the EU through the NIF (with KfW) will prioritise key potential investments and suggest a number of institutional reforms.

Moreover, the EU is co-funding the 200 MW **Windfarms in Gulf of El Zayt**, which will add 200 MW of wind power to the existing capacity of 540 MW.

The EU is also contributing with a EUR 16 million grant to the **Egyptian Power Transmission Project**, amounting to EUR 500 million and aiming at reinforcing the Egyptian National grid. 545 MW of wind farms are operating since 2009 in the Red Sea (Zaafarana Site) mainly financed through governmental cooperation with Germany, Denmark, Spain and Japan.

The Institutional Capacity Building of Egyptera Twinning (EUR 1.225 million) awarded to the Italian and Greek Regulatory Agencies will assist the Energy Electricity and Consumer Protection Regulatory Agency Regulator (Egyptera) in initiating and implementing the power sector reform process in accordance with EU best practices. In addition, the EU has also been providing support for opening the Egyptian Gas Market through the preparation of market regulation, the establishment of a gas market regulator and a transitional market plan.

The Southern Mediterranean Regional Sustainable Energy Finance Facility established by the EU, the EBRD and AFD in the framework of NIF will extend EUR 180 million of credit lines to Financial Institutions in the region including Egypt. Such credit lines will provide technical assistance and incentives to financing energy efficiency and sustainable energy investments in industry, SMEs, agribusiness, commercial services and residences.

The Energy Efficiency in the Construction Sector Project (MED ENEC) managed by the Delegation in Cairo and amounting to EUR 6.5 million aims to accelerate market development in services, technologies and measures in the area of energy efficiency in buildings. Egypt benefited from a large number of activities and training in energy audits and the preparation of Its National Energy Efficiency Action Plan (NEAP) among others.

The Water Sector Reform Programme-Phase II (WSRP-II) followed the success of WSRP- Phase I with EUR 80 million as a grant, both the Government of Egypt and the European Commission agreed to allocate an additional grant of EUR **120 million** to the phase two of Egypt's WSRP (WSRP-II) to be disbursed on the basis of a new set of jointly agreed reform benchmarks. The overall objective of the WSRP-II is to support the GoE in continuing the reform programme of the water sector. Three (3) technical assistance service contracts are provided in the framework of this programme to support: (a) the NWRP until 2037, (b) Creation of the National Rural Sanitation Strategy, Integrated Losses Reduction Strategy and Desalination plants Brine Disposal Codes, and (c) To establish the financial reform roadmap for the Urban Water sector. A smaller contract is supporting the preparation of the pre-feasibility studies for Desalination water treatment plants using PPP schemes.

Improved Water and Wastewater Programme (phase I): The project aims to rehabilitate and expand existing water and wastewater treatment plants as well as sewer networks in some of the most deprived areas. Through this initiative, the water

supply to households is significantly increased, with over three million people gaining access to water and sanitation in Gharbia, Sharkia, Damietta, and Beheira; also pollution from discharge of untreated wastewater in the environment was reduced. The project is co-financed by the KfW, EU, EIB, and AFD with KfW as the Lead Financing Institute (LFI).

Improved Water and Wastewater Programme (phase II): A new phase of the programme increases the coverage to additional four (4) governorates in Upper Egypt (Qnea, Sohag, Assuit, and Minya). Through this initiative, the water supply and sanitation coverage to households will significantly increase, to additional 4 Million Inhabitants. The project is co-financed by the KfW, EU, EIB, and AFD with KfW as the Lead Financing Institute (LFI).

Main **donor coordination** in the Water Sector is done through the DPG, with a specific sub-DPG on Water, in which wastewater is included. The sub-DPG is co-chaired by the EU Delegation and KfW. In addition close contacts are in place with key donors active in the water sector namely KfW, AFD, EIB, the WB and Swiss Development Cooperation. Policy dialogue with the two water-related ministries namely Ministry of Water Resources and Irrigation and Ministry of housing, utilities and urban communities together with the Ministry of Finance has been on-going since 2005 and continues through the on-going EU Water Sector Reform Programme. Moreover, the EU Delegation had confirmed its intention to proceed with the co-signature on behalf of the EU Delegation of the JISA memorandum of Understanding as a sign of EU full support to the donor coordination and investment harmonisation in the water sector led by Ministry of Water Resources and Irrigation

EUR 46 million of **Egypt's 2015 bilateral allocation** have been transferred to the NIF.

It is foreseen that this bilateral contribution to the NIF will support funding the **200 MW windfarm of Gulf of Suez** project together with KfW and that other wind energy relevant projects could be considered in the future. It has to be noted that in the least cost scenario of the Egyptian Energy Strategy 2035 the energy mix includes 20 GW of wind energy. The potential of Gulf El Suez is of 15 GW.

Also, through the above mentioned funds transferred to the NIF it is foreseen to co-fund the **National Drainage Program (NDP) III**. This project aims to increase agriculture productivity and production, food security and rural income by improving crop yield through improved soil quality attained through improved drainage systems for approximately 650,000 acres. The total costs for (NDP) III are estimated at EUR 260 million. The project is to be co-financed by IDB, AFDB, KfW and EU for a total funding of 160 Million EUR, EU total foreseen contribution to the budget is EUR 40 million, out of which EUR 29 million to be financed by the EU SSF bilateral envelope for Egypt, The project comes as the top priority investment pilot project identified in newly created integrated mechanism for co-ordination of external funding to this sub-sector. This mechanism is referred to as the Joint Integrated Sector Approach (JISA).

3.3 Cross-cutting issues

Environmental sustainability: The Project will address environment related issues in line with environmental regulations law 48 of 1982 and its by-laws on re-use of wastewater in agriculture and law on protection of the environment no of 1994, and executive regulations decree no 38 of 1995, Annex 2: Establishments subject to

environmental impact assessment and others) including ornithological recommendations.

Governance: It is expected that the programme could have a positive impact on the improvement of the decision-making processes and governance of the water and energy sectors.

Gender equality: The action is expected to contribute to the gender equality, since energy and water directly impacts the gender and influence areas such as household uses, health and hygiene, education and recreation, income generation, disposable income. Specific activities will be addressed in order to support gender equality and to improve living conditions and opportunities for women, such as: training, support to the development of income generating activities.

Local participatory approaches: Relations between CSOs, private sector representative bodies, and the Egyptian Authorities, are instrumental for the success of the reform agenda. Taking into consideration that energy and water are not controversial areas of cooperation, the programme could have a positive effect on the governments' cooperation with CSOs and the private sector.

4 DESCRIPTION OF THE ACTION

4.1 Objectives/ results

The **general objective of the programme** is to support the ongoing reform process of two key sectors of the Egyptian economy, **the water and renewable energy sectors**.

The **specific objective** is to contribute to improve the management and the use of these resources by improving operational efficiencies of concerned stakeholders and beneficiaries.

The expected results are as follows:

- Institutional and legislative reform in the water and energy sectors is implemented;
- Capacity Development for the relevant institutions is carried out;
- Communication and information plans for public awareness in resources conservation, and the dissemination information about reform plans and strategies are developed;
- Technical studies on innovative conservation approaches are developed;
- Institutional Financial Reforms are implemented;
- An appropriate participatory approach for planning and implementation of program activities is developed;
- Communication and awareness about the efficient use of energy and water including improving nationwide participation in preserving existing resources are implemented.

4.2 Main activities

1-Institutional and legislative reform in the water and energy sectors

Substantial institutional support will be provided at the central level, including for assistance in the implementation of strategies and plans and in the review and reformulation of existing legislation for rational sources use and reuse, helping the definition and implementation of the standard policy monitoring indicators for water and energy sectors.

2- Capacity Development for the relevant institutions

The capacity building activities will address but are not limited to the following:

- (a) Improving the institutional capacity;
- (b) Improving the managerial capacities of the beneficiary organisations in the fields of planning, investment prioritisation and promotion;
- (c) Elaborating adequate operation & maintenance (O&M) schemes;
- (d) Economic and financial modelling used in sectorial planning (such as Markal), project development (such as ret screen), or on a more macro level in order to measure the mutual impact of sectorial development (such as the General Equilibrium Model). Such activities will enhance the level of decision making process, based on accurate and informed data.

3 - Developing communication and information plans for public awareness in resources conservation, and the dissemination information about reform plans and strategies

The activities carried out under this task will target relevant stakeholders including NGOs concerned with support for enhancing quality of life, companies, donor agencies, academia, industry representatives, financial institutions, media and various Governmental stakeholders. This will encompass, but not limited, the following:

- Designing adequate campaigns to inform about projects and reforms agenda and measure to be taken in energy and water including TV spots, films and other media;
- Arranging technical meetings with relevant institutions to ensure their awareness of the Project and to confirm their support for and participation in the Project;
- Developing and implementing information and public awareness with detailed dissemination activities for the purpose of demonstrating results of project implementation and/ or reforms.

4 - Preparing technical studies

The ultimate purpose is to enable all partner agencies of the Government of Egypt (including governorates) to effectively elaborate and implement plans for integrated resources management. This could be best achieved through carrying out sectorial studies about the efficient use of resources and infrastructure projects.

Activities under this component will focus on use of existing resources by improving operational efficiencies, increasing the efficient use of energy, reducing water losses and reusing treated wastewater and; protect public health and the environment.

5 - Financial Sustainability Reform

Activities under this component will focus on aspects related to the establishment of transparent and efficient budgetary procedures, improved expenditure planning and monitoring systems. In addition the component will focus in:

1) Undertaking a technical, commercial, staffing and financial diagnosis of the relevant ministries; 2) Identifying and evaluating the technical improvements required to optimise operations, including staffing reassignment; 3) Drafting financial roadmaps with different scenarios, in agreement with the beneficiary; 4) Drafting business plans and models including staffing plan, subsidies reduction and other options to enable the achievement of financial sustainability; 6) Support the beneficiaries to make a case with GoE relevant authorities (Cabinet, Parliament, MoF...) in advocating sustainable financial management of water and energy. Cost recovery analysis will be also carried out in order to detail the level of subsidies in each sub-sector, thus paving the way for reaching the breakeven point.

Throughout the implementation of the above-mentioned activities the following measures will be ensured:

- An appropriate participatory approach for planning programme activities is developed;
- An innovative communication plan is agreed for the efficient use of energy and water including improving nationwide responsiveness to campaigns aiming to preserve existing resources;
- An active strategic/sector policy dialogue platform is established around the main challenges faced in each sector.

4.3 Intervention logic

In a context where the regulatory and institutional framework appears as a key factor to a sound governance and development of the energy and water sectors and where the Authorities are committed to improving service delivery, the Programme intervention at the strategic, regulatory and dialogue levels is expected to produce tangible impact through the implementation of concrete reform measures agreed in the strategic documents. Regarding implementation, as the momentum already exists at the level of existing institutions, the support to on-going initiatives by the transfer of EU expertise appears as the most efficient way to generate additionality. The emphasis on coordination enhancement is also critical as many institutions could be involved in the various projects considered (in particular with respect to energy efficiency and integrated water resources management) and the role of an external assistance supporting good practices and governance can be conclusive. Several good practices already exist in the region notably in fields of wastewater re-use and the development of clean energy mechanisms. Such good practice should be capitalised on.

5 IMPLEMENTATION

5.1 Financing agreement

In order to implement this action, it is foreseen to conclude a financing agreement with the partner country, referred to in Article 184(2)(b) of Regulation (EU, Euratom) No 966/2012.

5.2 Indicative implementation period

The indicative operational implementation period of this action, during which the activities described in section 4.2. will be carried out and the corresponding contracts and agreements implemented, is 48 months from the date of where financing agreement is concluded.

Extensions of the implementation period may be agreed by the Commission's authorising officer responsible by amending this decision and the relevant contracts and agreements; such amendments to this decision constitute technical amendments in the sense of point (i) of Article 2(3)(c) of Regulation (EU) No 236/2014.

5.2.1.1 Procurement (direct management)

Subject in generic terms	Type	Indicative number of contracts	Indicative trimester of launch of the procedure
Enhancing capacities in the water sector	Services	1	2 nd trimester
Enhancing capacities in the Energy sector	services	1	2 nd trimester

5.3 Scope of geographical eligibility for procurement and grants

The geographical eligibility in terms of place of establishment for participating in procurement and grant award procedures and in terms of origin of supplies purchased as established in the basic act and set out in the relevant contractual documents shall apply.

The Commission's authorising officer responsible may extend the geographical eligibility in accordance with Article 9(2)(b) of Regulation (EU) No 236/2014 on the basis of urgency or of unavailability of products and services in the markets of the countries concerned, or in other duly substantiated cases where the eligibility rules would make the realisation of this action impossible or exceedingly difficult.

5.4 Indicative budget

	EU contribution (amount in EUR)
Component 1: Strengthening the capacities at central and local levels in the water sector	4 600 000
Component 2: Strengthening the capacities at central and local levels in the Energy sector	2 800 000
Evaluation, Audit	100 000
Communication and visibility	500 000
Totals	8 000 000

5.5 Organisational set-up and responsibilities

The implementation of the project will follow direct centralised management. A financing Agreement will be signed between the Commission and Egyptian Government. The Commission will conclude 2 service contracts on behalf of the beneficiaries. The implementing beneficiaries will be Ministry of Water Resources and Irrigation, and the Ministry of Electricity and Renewable Energy who are the beneficiaries of the programme.

Two Steering Committees, one for water and one for energy will meet on a regular basis, to be defined established by governmental decrees. The Steering Committees will oversee and guide the overall direction and policy of the programme. It shall meet twice a year as a general principle and can be convened whenever the project's implementation requires strategic decision or changes. The committees will be chaired by the respective Ministries and will meet regularly on 6- Monthly basis. Each steering group will be composed of the relevant stakeholders in the water and renewable energy sectors. The European Union Delegation will participate as observer.

Responsibilities of the Steering Committee:

- Overseeing the implementation of the different components;
- Monitoring and controlling (cost, quality, timing);
- Taking decisions with regard to major changes in the general programme set-up of the project (including procedures and their further harmonisation) compared to the set-up agreed with all stakeholders before;
- Approving of major changes in the selection of projects to be contracted;
- Initiating special audits regarding the project;
- Initiating and reviewing regular independent monitoring of the project.

The Steering Committee has the right to invite further members including members from CSO or any other stakeholder whenever deemed appropriate.

5.6 Performance monitoring and reporting

The day-to-day technical and financial monitoring of the implementation of this action will be a continuous process and part of the implementing partner's responsibilities. To this aim, the implementing partner shall establish a permanent internal, technical and financial monitoring system for the action and elaborate regular progress reports (not less than annual) and final reports. Every report shall provide an accurate account of implementation of the action, difficulties encountered, changes introduced, as well as the degree of achievement of its results (outputs and direct outcomes) as measured by corresponding indicators, using as reference the logframe matrix. The report shall be laid out in such a way as to allow monitoring of the means envisaged and employed and of the budget details for the action. The final report, narrative and financial, will cover the entire period of the action implementation.

The Commission may undertake additional project monitoring visits both through its own staff and through independent consultants recruited directly by the Commission for independent monitoring reviews (or recruited by the responsible agent contracted by the Commission for implementing such reviews).

5.7 Evaluation

Having regard to the importance of the action, a final evaluation will be carried out for this action or its components via independent consultants contracted by the Commission.

The Commission shall inform the implementing partners at least three months in advance of the dates foreseen for the evaluation missions. The implementing partners shall collaborate efficiently and effectively with the evaluation experts, and inter alia

provide them with all necessary information and documentation, as well as access to the project premises and activities.

The evaluation reports shall be shared with the partner country and other key stakeholders. The implementing partner and the Commission shall analyse the conclusions and recommendations of the evaluations and, where appropriate, in agreement with the partner country, jointly decide on the follow-up actions to be taken and any adjustments necessary, including, if indicated, the reorientation of the project.

5.8 Audit

Without prejudice to the obligations applicable to contracts concluded for the implementation of this action, the Commission may, on the basis of a risk assessment, contract independent audits or expenditure verification assignments for one or several contracts or agreements.

Expenditure verification is foreseen as a part of the service contracts.

5.9 Communication and visibility

Communication and visibility of the EU is a legal obligation for all external actions funded by the EU.

This action shall contain communication and visibility measures which shall be based on a specific Communication and Visibility Plan of the Action, to be elaborated at the start of implementation and supported with the budget indicated in section above.

In terms of legal obligations on communication and visibility, the measures shall be implemented by the Commission, the partner country, contractors, grant beneficiaries and/or entrusted entities. Appropriate contractual obligations shall be included in, respectively, the financing agreement, procurement and grant contracts, and delegation agreements.

The Communication and Visibility Manual for European Union External Action shall be used to establish the Communication and Visibility Plan of the Action and the appropriate contractual obligations.

EUR 500,000 is earmarked for programme's communication and visibility purposes. These will be implemented through service contracts, making use of one of the Commission's dedicated framework contracts. Indicatively, these contracts could be procured in the third semester of 2016.

The action shall encompass a Communication and Visibility Plan for each sector to be elaborated developed at the start of each specific assignment. The communication and visibility will address as well issues related to the efficient use of resources (i.e. promotion of energy/water efficiency, the organization of energy/ water days etc.), through which the visibility of the EU will be increased. The initial communication and visibility measures are identified on the log frame (outputs) under communication and information plans.

APPENDIX - INDICATIVE LOGFRAME MATRIX (FOR PROJECT MODALITY) ⁴

	Intervention logic	Indicators	Baselines (incl. reference year)	Targets (incl. reference year)	Sources and means of verification	Assumptions
Overall objective: Impact	The general objective of the programme is to support the ongoing reform process of two key sectors of the Egyptian economy, the water and renewable energy sectors .	<ul style="list-style-type: none"> - Number of additional Megawatts in the national grid produced from renewable Sources*. - number of persons with access to improved sanitation facilities (WHO standards)*. 	<ul style="list-style-type: none"> - The Energy Sector strategy until 2035, the master plan on renewable energy and energy efficiency ; - and the national water resources plan for Egypt until 2037. 	<ul style="list-style-type: none"> -At least 500 MW of renewable energy generation launched or commissioned before the end of the project. - At least 100,000 additional connections to the sanitation network have been created before the end of the project. 	<ul style="list-style-type: none"> -Report from the New and renewable Energy Authority, data from the Energy Information system that is currently being implemented in e Information and Decision Support Centre at the Cabinet -MWRI Report on the rehabilitation/reconstruction of high priority pumping stations. 	Willingness of the government is maintained to pursue implement innovative techniques in the fields of generation of energy from renewable sources and wastewater reuse as mean for ensuring security of supplies through diversification of sources.
Specific objective(s): Outcome(s)	The specific objective is to contribute to improve the management and the use of these resources by enhancing operational efficiencies of concerned stakeholders and beneficiaries.	<ul style="list-style-type: none"> - Recommendations regarding the legislative and institutional reforms are agreed and adopted at Ministerial levels -Number of net of direct temporary and permanent jobs created in the Water and Energy sectors.* 	<ul style="list-style-type: none"> -The baseline is the prevailing situation in 2015 in the energy and the water sectors. - Current staffing reports available in beneficiary institutions. 	<ul style="list-style-type: none"> - At least 4 legislative and institutional recommendations in the water and energy sectors are adopted at Cabinet level - At least 100 Permanent jobs created in energy and Water related to the infrastructure 	<ul style="list-style-type: none"> - Ministerial decrees and other legislative texts - National Statistics of Central Agency for Public Mobilization and Statistics (CAPMAS) 	The approval of the parliament of such reform measures and recommendations.

⁴ Mark indicators aligned with the relevant programming document mark with '*' and indicators aligned to the EU Results Framework with '**'.

				<p>projects.</p> <p>-At least 500 Temporary jobs created in energy and Water related to the infrastructure projects.</p>		
Outputs	Institutional Financial Reforms are implemented	Approved financial and institutional restructuring plans in relevant administration based on good governance principles.	The current financial and institutional set up prevailing in 2015.	<p>- Institutional and financial reforms of NREA approved at ministerial level</p> <p>- Establishment of the national water council and approving its mandate.</p>	Ministerial decrees and other legislative texts	Reforms supported and agreed by the majority of involved stakeholders.
	Capacity Development for the relevant institutions is carried out	- Number of training sessions provided and initiatives implemented to increase Capacities in the Water and Energy sectors. (e.g. on the job training, provision of targeted TA, seminars, workshops)*	- Current training plans available in beneficiary institutions.	- Approved training needs assessment carried out by the project, and the implementation of the relevant number of trainings.	- Training plans and evaluation sheets in the beneficiary institutions HR departments.	Based on the assumption that the Government will provide the trainees with good salary packages, limited to none turnover rate of the trained staff.
	Institutional and legislative reform in the water and energy sectors is achieved	- Relevant sector strategies are drafted and endorsed by the Government of Egypt*.	The current arsenal of laws and bylaws governing the water and energy sectors.	- Drafting of bylaws of draft sectors act (Electricity act, Water act, law 84/1982).	The Egyptian official journal	Sufficient willingness from the government and parliament to pursue and implement legislative reforms

	An appropriate participatory approach for planning and implementation of program activities is developed	Number of Public Hearing sessions organised during strategy implementation/ prior to investment project execution.	The current Number of Public hearings held in 2015.	- The relevant number of public hearings held in the lifetime of the project based on the number of projects launched.	- Project reports and surveys.	Willingness of the Egyptian Government to conduct public hearings and inform the public. Public motivation for active participation in the hearings
	Communication and information plans for public awareness in resources conservation, and the dissemination information about reform plans and strategies are developed	- Number of awareness campaigns at local or national levels (TV broadcasts and bulletins). -Number of articles and reports in the local newspapers and TV programmes.	The current number of awareness campaigns at local/national media	- Implementation of the relevant visibility events in the relevant media as per the communication and visibility plan of the project. - Creation of social media platforms for dissemination of project achievements.	- Egyptian Radio and Television Union (ERTU) number of recorded news. -Number of press releases, articles related to project published on the media websites.	Active citizen participation in awareness and advocacy campaigns Willingness of the government, public and private media, and other private actors to participate in funding and organising such awareness campaigns