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Related documents:
CC 460, Mess 1097/13

DECISION OF THE ENERGY CHARTER CONFERENCE

Subject: Adoption by written procedure of the Recommendations of the In-depth Energy Efficiency Review of Ukraine

By CC document 460, dated 9 October 2013, delegations were invited to approve the Recommendations of the In-depth Energy Efficiency Review of Ukraine. As specified by Rule 20 of the Rules of Procedure (CC 53 corr. 2) concerning the adoption of decisions by correspondence, members of the Energy Charter Conference were informed that any delegation that wished to object to this proposal should notify the Secretariat of its position in writing not later than 31 October 2013.

Having received no objections within the specified time limit, on 31 October 2013 the Energy Charter Conference **welcomed** the report on the In-depth Energy Efficiency Review of Ukraine and **endorsed** the recommendations made to the Government of Ukraine.

Executive summary of the In-depth Energy Efficiency Review of Ukraine is attached.

Keywords: In-depth review, Energy Efficiency, PEEREA, Ukraine

Annex

IN-DEPTH REVIEW OF THE ENERGY EFFICIENCY POLICY OF UKRAINE

Background

Ukraine occupies a fertile plain north of the Black Sea. It shares a land border with seven countries, three of which were part of the USSR until 1991. Ukraine suffered badly in the economic collapse of 2008 and its economy in 2013 is in a fragile state of recovery.

Emigration is ongoing and the population continues to fall, with implications for domestic demand and the growth in age dependency. The World Bank has been critical of Ukraine's economic performance, attributing the cycle of booms and busts since independence to failures in the country's governance system. It is not alone in its criticism: the European Union (EU), in assessing the candidature and subsequent performance of Ukraine in relation to agreements entailing commitments freely entered into, has been critical of the progress. Thus the widely held external view is that the pace of reform is too slow to deliver economic recovery.

The requirement for action on a broad front is recognised by the Ukrainian authorities. The president's Programme of Economic Reforms (PER) for 2010–2014 is an expression of the government's determination to focus on policy delivery to achieve a "Prosperous Society, Competitive Economy, and Effective State".

Popular support and acceptance of the consequences of this commitment to effective energy policies and other reforms advocated by a host of international bodies, external agencies and governments will be tested in the course of the implementation. Thus, while there are deficits in the practical application of policies, the aspiration to achieve freedom, democracy, good relations with its neighbours and a better life for Ukraine's citizens is widely endorsed.

Ukraine's entry into the World Trade Organisation (WTO) in February 2008 and the development of its relations with the EU in the frame of the Partnership and Cooperation Agreement (PCA) of 1998 and its intended successor by way of a commitment to an association agreement in 2008 are indicative of progress in the harmonisation of trade and the alignment of fundamental principles of human rights and justice.

The EU is committed to a policy of sequenced engagement with Ukraine to work towards political association and economic integration based on respect for common values. The EU's role in actively encouraging international financial institutions to contribute to the modernisation of Ukraine's gas transmission system is an important area of the EU-Ukraine bilateral agenda. Thus there are many aspects to the international dialogue and energy governance is one of the most pressing.

Energy and Energy Efficiency Policy

Energy sector reform in accordance with the EU acquis and in compliance with the Energy Community Treaty (EnC) is now one of the cornerstones of Ukraine's energy policy. Membership of the Energy Community provides a new focus and thrust towards creating the framework conditions for what needs to happen by way of investment, revenue flow, cost apportionment, elimination of subsidies and debt collection. The intent is to create the conditions in which the risk premium on investment in Ukraine's energy system is minimised. Ukraine's energy policy is evolving to give investors confidence in the hope that they will recover their investments and be adequately rewarded.

The natural resources and economic development of Ukraine, including mineral an hydrocarbon deposits, the extensive gas pipeline transit and transmission infrastructure and the dominance of heavy energy-intensive industry combine with a history of low energy prices to ensure that, in the current circumstances in Ukraine, energy policy is a dominant societal issue. Economically hard-pressed businesses and consumers are struggling to adapt to higher energy prices.

The promotion of new and foreign direct investment (FDI) in Ukraine's energy production, transmission, distribution, supply and end-use sectors is one of the early responses identified by policy makers. With such investment Ukraine aims to deliver a modern and efficient energy system that will deliver affordable services sustainably over time. Towards this goal there is a government commitment to achieving an "ease of doing business objectives" — a metric on which Ukraine currently scores unfavourably in international comparisons.

In the energy sector the authorities have succeeded in establishing framework conditions for certain priority kinds of FDI, albeit with more or less effective conditions attached. The most recent example is petroleum exploration and production rights and, before this, the introduction of attractive renewable energy production tariffs. Among the less successful conditions are the politically popular but arguably less effective indigenous origin clauses attaching to renewable energy projects that may have unintended negative consequences.

The Draft Energy Strategy of Ukraine to 2030 went to public consultation in the summer of 2012. Since then there have been calls to revisit economic growth assumptions and energy demand. The International Energy Agency (IEA), in an extensive 2012 review* of energy policy in Ukraine, has stressed the benefits of moving to resolutely address challenges and grasping the opportunity to realise the untapped potential of energy efficiency and indigenous sources of energy. High on the IEA's list of policy priorities is energy efficiency improvements at all stages of the energy value chain.

Traditionally, low and subsidised energy prices for both consumers and industry and the slow progress in moving towards full cost recovery have sustained resistance to price reform among consumers and starved energy suppliers of funds. This is instrumental in the continued deterioration of the energy infrastructure of Ukraine. In the absence of

prices that are fully cost reflective, energy efficiency outcomes will be below their economically justifiable level. Electricity, gas and, especially, municipal CHP and heat utilities and to some extent their customers are all severely challenged by the rise in energy prices coupled with the embedded energy inefficiencies that are more costly and increasingly hard to bear. Thus, while the key elements of the situation have been clearly and accurately diagnosed in several technical assistance projects and other Ukrainian projects, the practical redress responses still need to be fully articulated.

A high proportion of the heating needs of consumers in Ukraine are met through district heating, often in combination with electricity generation. The supply of heat to domestic consumers is for the most part a municipal responsibility and one that increasingly cash strapped municipalities are challenged to meet. Part of the problem is the amount and proportion of unmetered heat that is subject to a flat rate charge with the consequence that there is little or no consumer incentive to conserve use. It is compounded by the low thermal performance of the building stock.

Thus utilities are faced with the need to carry out the following actions.

- Invest in modern energy conversion CHPs or district heating plants
- Renew and repair an ageing heat distribution pipe work infrastructure
- Put in place a satisfactory consumer metering system
- Collect sufficient billed revenue from cash strapped consumers to finance energy purchases and fund the necessary investment.

To date, policy has concentrated on ways of addressing the revenue gap and securing the required investment from private and public sources, resulting in a range of legislative initiatives to provide for public private partnerships, communities of end-users and individual consumption metering. A “Concept for the programme of modernisation and development of heat supply systems of Ukraine for the period 2012–2022" was proposed but failed to be adopted.

The State Agency on Energy Efficiency and Energy Saving of Ukraine (SAEE) was established to implement the state policy on energy efficiency, energy saving, renewable energy sources and alternative fuels. It is part of the executive authority system, directed and coordinated by the Cabinet of Ministers of Ukraine through the agency of the Minister of Economic Development and Trade of Ukraine. The SAEE is charged with providing its proposals for state sustainable energy policy, the development and approval of programmes of action, the provision of information, the establishment of norms and standards and monitoring for compliance as well as the appointment of directors to the institutions for which it is accountable.

On the matter of R&D and support for policy making the SAEE and its predecessor have supported research covering a wide spectrum of topics related to energy supply and demand. A full list of applications supported to date is available on the SAEE website database for analysis by project, technology and development as well as by sector. A

great number of recent projects in the area of heat (32) concern the reduction of gas use and its displacement by other energy sources.

Several successful initiatives by the Ministry of Regional Development, Construction and Housing and Communal sector have demonstrated the potential for energy service companies (ESCOs) to deliver solutions for the effective heating service of apartment blocks. Weaknesses in the current framework have been identified and the costs of a Ukraine-wide programme of rehabilitation have been scoped. Thus in key areas of energy services provision there is a detailed analysis and broad consensus of what needs to be done. The business of organising and delivering it at the necessary pace and scale remains to be tackled and financing continues to be the major challenge.

Nevertheless, within the resources currently available, there are plans for additional pilot schemes and local initiatives to demonstrate the benefits of what can be achieved and improve the understanding of the state's role in creating the necessary conditions. However, it is clear from the analysis and experience to date that the financing of any project is closely linked to the value of the savings, which continue to be understated due to heat and gas prices that are too low.

Renewable Energy Policy

The history of state ownership and central planning, the relative abundance of cheap coal and natural gas and the dominance of nuclear energy in the electricity sector go some way to explaining Ukraine's low levels of renewable energy deployment.

In the electricity sector there are two large low-carbon sources: nuclear energy contributed 45.5% to the electricity supply in 2012 and the contribution of conventional hydropower was 5.6%. The potential for wind and solar generated electricity in Ukraine is well recognized and the current feed-in tariff incentive is said to be generous and more than sufficient to stimulate activity although it suffers from administrative conundrums and legal uncertainties. Others have pointed to the potential of biomass, citing the ubiquity of forest and agricultural wastes, which have the potential to be either directly fired to produce heat or fermented to produce gas of varying quality. The particular route advocated depends on the scale and circumstances surrounding the use of the output.

Following a decision by the Energy Community ministers and agreement to adopt renewable energy targets for 2020, Ukraine's target for renewable energy in terms of primary energy supply is 11% by 2020. While this target is modest by comparison with those of the large member states in the EU, it will be challenging for Ukraine, coming from a low base against a background of subsidised energy prices for consumers. Ukraine needs to cast and progress its renewable energy action plan while taking into consideration the sustainable deployment of renewable energy and with an eye to the short term impact on prices. Thus the plan should be strategically informed and economically effective and provide ample opportunity for competition and enterprise in its delivery. It should rest on an evidence base that is augmented in the course of the delivery and subject to regular reviews against transparent criteria.

Ukraine's status in the United Nations Framework Convention on Climate Change (UNFCCC) and the associated protocol provides an opportunity to further develop Ukraine's well-structured approach to joint implementation (JI) projects with the attendant opportunity to generate and earn the value of assigned amount units (AAUs).

Overall Assessment of Progress

The present circumstances in Ukraine are characterised by a fragile economic recovery, internal and external pressures for better governance, the geopolitical interests of its close neighbours and continuing economic uncertainty in the EU and globally. Thus the deepening of Ukraine's engagement with international institutions, treaties and the EU raises new challenges.

Because of its sheer size, strategic position, natural resources, technical capability and long term economic potential, the development of Ukraine will have important consequences for its citizens and neighbouring countries. Most of the EU's current energy preoccupations are reflected in the five roadmaps for bi-lateral cooperation on energy by the EU and Ukraine. These are nuclear safety, the integration of gas and electricity markets, the security of energy supplies and the transit of hydrocarbons, the coal sector and energy efficiency.

Energy policy figures prominently in domestic politics and forward planning. Ukraine's actions and outlook are of great interest to Russia and the EU and there are vital commercial and security of supply interests at play. Thus the recent commitment to the EnC sets a direction for the evolution of Ukraine's energy policy that acknowledges the superiority of markets, properly regulated and structured for competition, in delivering sustainable energy services.

Because of the importance of public and private FDI for economic renewal, there is a growing appreciation of the importance and urgency of reducing the risk premium for investors in Ukraine to manageable levels. Ukraine's improved ranking on ease of business objectives from 152nd in 2012 to 137th in 2012 is evidence of progress in this regard.

Artificially low energy prices have combined with other factors to create a situation where many energy users are caught in an affordability trap. Higher energy prices are affecting their ability to pay and the impact of these prices is amplified by excessive energy usage (real or nominal) resulting from the gross inefficiency of the supply and end-use systems. Thus the sourcing and application of funds to modernise and upgrade dilapidated energy infrastructure are a key priority in Ukraine's energy policy. A solid and predictable economic, energy policy and regulatory framework will help to attract the necessary funds.

The availability of funds for investment is always conditional upon a satisfactory appraisal of the whole spectrum of risks. In Ukraine's energy sector these include policy, regulatory, market and technology risks. In the absence of a credible and stable energy

policy and a sufficiently robust and independent regulatory regime, most investors will choose to wait for clarity. The calls for a revision to the energy policy at public consultation in 2012 have to be seen in this light. Judging by the public statements emanating from the US and elsewhere the assumptions and projections of the draft energy policy have to be revisited. In the opinion of the IEA a stronger focus on the demand side is warranted.

Structured energy markets that are the subject of competition need the assurance of impartial and professional regulation by suitably empowered regulators. The continued development of the regulatory function in line with the commitments and obligations of the EnC is of vital importance to Ukraine. Upon this rests its ability to attract the necessary investment in gas, heat and electricity generation facilities and networks. Whilst its initial performance gave cause for concern, Ukraine appears to have reached a better understanding of the requirements and benefits of the Energy Community. In view of the legislative effort, the cost and the new institutional development involved it will be important to have a solid understanding of the benefits in terms of when and to whom they will flow.

The settling of a robust energy policy and the enactment of its provisions with appropriate regulatory and policy oversight constitute the start of a longer and deeper process that has to capture the whole of the energy system from resource development to end-use. With cost reflective pricing, robust regulation, clear market rules, sensible permitting and rigorous project appraisal, investment in large energy infrastructure will, in the absence of any distorting factors (such as an excessive cost of capital), tend to lead towards robust decisions being made in the specification of the energy performance of new equipment.

However, where decisions are smaller or where expertise is limited and focussed elsewhere there is no guarantee that energy efficiency considerations will be either sufficient or robust. Recognising this, the Ukrainian authorities have resorted to regulation. Examples of overprescriptive regulation abound where a softer, more market-friendly approach focussing on information and awareness could achieve a more satisfactory outcome. Where regulation is appropriate the main consideration has to be effectiveness. Thus the principal determinant of the effectiveness of any regulation is the extent to which it is economically proportionate, practical and enforceable. Compliance can be assured at a reasonable cost once the conditions of proportionality and practicality are fulfilled.

Therefore, while many of the policy objectives of the Ukrainian authorities are clear, the means to achieve them effectively are less detailed and in many cases insufficiently elaborate for an implementation action plan. This is understandable as the formulation of energy efficiency policy at an intellectual level implies a balanced consideration of its interaction with other policies, often also in a similarly formative stage. Inevitably, there are trade-offs within energy policy between the classic affordability, security and environmental impacts to which social acceptance must be added in Ukraine’s circumstances. In acknowledging that this is a job in itself, it will be clear that the process

of implementation is a far larger, more disparate and untidy task that is only fully revealed in the act of implementation.

Implementation is in the province of the market — a fragmented market of many actors — each with his own set of customers, suppliers and regulatory agencies. No single policy maker can be reasonably expected to have a complete and sufficient picture of the market. Nor indeed will the market have a full appreciation of what the policy maker has in mind. This is the essence of the consultative approach, in which the government sets out its proposals and invites comments. While simple in outline, without careful preparation and recourse to a solid base of empirical data the process becomes skewed and the result is not balanced or fair.

Governments in many countries have recourse to institutions to fill gaps in the data by way of research — research that continues into the implementation phase with the specific intent to monitor and review progress.

In the first half of 2013, less than three years into a four-year programme, 2010–2014, it is already evident that the first of the four key energy efficiency targets has not been met, and the fourth may not be capable of being measured. Thus there is doubt over the level of understanding, commitment and ability to formulate, resource and deliver on energy policy goals. The evidence points to the need for deep reforms to the policy process, which can be assisted by a much greater openness to a wider set of inputs, transparency of decision making and the fixing of accountability and responsibility for delivery.

Recommendations

General

- The Government of Ukraine should meet legitimate expectations for a recast energy strategy based on well-founded assumptions, realistic projections and the acknowledged potential for huge energy efficiency gains according to the needs of various stakeholders. The finalisation of the strategy should be expedited.
- The Government of Ukraine should accelerate all necessary and desirable reforms so as to radically improve i) the prospects for investment and ii) perceptions of Ukraine as measured by the metrics of reputable international bodies.
- The Government of Ukraine should ensure that its published policy intent is backed up by solid programmes of action that are subject to periodic evaluation, review and adjustment according to clearly stated principles.
- The Government of Ukraine, in the spirit of the PER, should take steps in the formulation of its energy policies to ensure that it can benefit from the work of public and private institutions and interested NGOs.
- The Government of Ukraine should continue to support measures aimed at raising awareness of energy efficiency and educating public officials and the wider population on local, regional and national levels.

Institutional Framework

- The Government of Ukraine should, with recourse to appropriate institutions and to public consultation, ensure that high standards of governance are obtained in the formulation of energy and energy efficiency policies and in their implementation through energy market liberalisation, utility privatisation and the regulation of competition.
- The Government of Ukraine should, as a matter of urgency, take steps to ensure that it has the institutional capacity appropriately structured to effectively formulate, monitor, analyse and review energy and energy efficiency policies and their implementation and enforcement.
- The Government of Ukraine should provide for the development of institutions for the promotion of sustainable energy, including energy efficiency, renewable energy and JI opportunities.
- The Government of Ukraine should improve the status of the SAEE and establish it as a separate structure within the government.
- The Government of Ukraine should ensure that sufficient human and financial resources are allocated to the SAEE as the leading agency, as well as to all units within ministries and regional administrations responsible for the development and implementation of energy efficiency programmes.
- The Government of Ukraine should ensure that supporting educational institutes and professional bodies concerned with educational formation and skills development are well informed about energy efficiency goals, targets and programmes.
- The Government of Ukraine must enable, resource and underpin the impartiality and independence of the energy regulator with legislation.

Energy Market and Pricing

- The Government of Ukraine should evidence the strength of its commitment to costreflective energy pricing. It needs to provide for an integrated approach to individual metering, end-use efficiency, comfort and other benefits in tandem with price rises. It should proceed at an appropriate pace of reform in a secure market and policy framework.
- The Government of Ukraine should ensure that energy affordability is closely monitored and that remedial action to alleviate hardship is promoted through an expert body.
- The Government of Ukraine should ensure that its guidance for the regulator is transparent, rooted in energy policy and thought through to avoid unintended consequences.
- The Government of Ukraine should make adequate provision for the effective regulation of monopolies and competition in the electricity, natural gas and heat distribution markets.
- The Government of Ukraine should ensure that the reforming of district heating is in the long-term interests of consumers and sensitive to their short-term needs.

The government should make sure that the framework conditions for heating service provision are conducive to securing new investment to improve energy efficiency and service delivery.

Energy Efficiency funding

- The Government of Ukraine should, on the basis of robust energy projections and economic analysis, budget sufficient expenditure to leverage the huge energy efficiency potential of the economy to improve welfare, competitiveness and environmental impact.
- The Government of Ukraine should ensure that the available funding and budget allocations are multi-annual and balanced between institutions and their programmes.
- The Government of Ukraine should allow for multi-annual municipal budgeting and for the retention of savings resulting from investment in energy efficiency, so as to provide appropriate incentives for municipal actions.
- The Government of Ukraine should consider an energy efficiency obligation as acondition of any energy utility supply licence.
- The Government of Ukraine should give careful consideration to the nature and flexibility of any energy efficiency obligation to ensure that it is economically effective and capable of delivering the desired outcome in the interests of consumers.
- The Government of Ukraine should draw on the experience of IFIs in framing tax policies and allowances for energy efficiency and renewable energy so as to maximize the effectiveness of any such concessions.

Energy Efficiency Programmes and Measures

- The Government of Ukraine should ensure that all energy efficiency programmes are material in relation to their desired outcomes.
- The Government of Ukraine should complete the introduction of cost effective administrative measures such as energy efficiency labels for household appliances. In addition, it should analyse and consider the introduction of well-proven energy performance standards for different categories of energy using products on a voluntary basis.
- The Government of Ukraine should ensure that the reforming of the district heating sector proceeds at a pace and in a sequence that will provide early returns and minimize the risks of either underinvestment or the standing of valuable assets.
- The Government of Ukraine should ensure that retrofit programmes are legally facilitated with regard to compulsory participation of homeowners, appropriate standards and quality assurance.
- In the process of finalising the Law on Energy Efficiency in Residential and Public Buildings, the government should adopt a strategic approach to the

implementation of the EU Directive on the Energy Performance of Buildings to maximise benefits and minimise compliance costs.

- The Government of Ukraine should adopt and deliver a national energy efficiency action plan preparatory to the launch of new measures in pursuit of its 2020 targets.
- The Government of Ukraine should promote the adoption of ISO 50 001 standards to large industrial enterprises, incorporating a standardised approach to energy auditing.
- The Government of Ukraine should encourage the SAEE to develop best available technology programmes of interest to donors and IFIs.

Renewable Energy Sources and CHP

- The Government of Ukraine should place the economic analysis, technical assessments and environmental impacts of its renewable energy (RE) deployment projections in the public domain.
- The Government of Ukraine should focus on the cost and sufficiency of incentives and the removal of barriers to the deployment of RE rather than, for example, creating barriers to competition.
- The Government of Ukraine should consult on, finalise and commit to the implementation of its renewable energy action plan, preparatory to the launch of new measures to support the deployment of renewable energy in pursuit of the 11% 2020 target.
- In the light of the strong advocacy for biomass by international and Ukrainian commentators the government should commit to a number of regional pilots to validate the potential of straw and wood biomass to avail of a "learning by doing" approach.
- The Government of Ukraine should ensure that CHP is an integral part of the renewable energy action plan as the technical, market, regulatory and environmental challenges are all of a piece in terms of delivering a robust solution.
- High efficiency cogeneration should continue to be promoted in the interests of making the best use of the available gas.

Data Collection and Monitoring

- The Government of Ukraine should continue to promote the collection, collation and timely publication of energy supply and demand statistics by placing the onus to provide on primary sources of information, and publication on the National Statistics Service.
- The accuracy of the energy balance is important for public and private planning. The government should ensure that users have access to accurate aggregate, sector-specific data for energy supply and use.