

Evaluating the Multiple Benefits of Energy Efficiency

Wednesday, 14 March 2012

IEA Headquarters, Paris

INTERNATIONAL ENERGY AGENCY

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- Secure member countries' access to reliable and ample supplies of all forms of energy; in particular, through maintaining effective emergency response capabilities in case of oil supply disruptions.
- Promote sustainable energy policies that spur economic growth and environmental protection in a global context – particularly in terms of reducing greenhouse-gas emissions that contribute to climate change.
- Improve transparency of international markets through collection and analysis of energy data.
- Support global collaboration on energy technology to secure future energy supplies and mitigate their environmental impact, including through improved energy efficiency and development and deployment of low-carbon technologies.
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Many thanks go to all the guest speakers, whose material generated an invigorating discussion. In order of the Agenda, the speakers were:

- Ms. Mirjam Harmelink, Harmelink Consulting
- Mr. William Baker, Consumer Focus, United Kingdom
- Ms. Véronique Ezratty, Medical Studies Department, Electricité de France (EDF)
- Mr. David Ormandy, Warwick University, United Kingdom
- Ms. Julia Reinaud, Institute for Industrial Productivity
- Ms. Ingrid Holmes, E3G (Third Generation Environmentalism)
- Ms. Christine Patterson, Energy Efficiency and Conservation Authority, New Zealand
- Mr. Jim Scheer, Sustainable Energy Authority of Ireland, Ireland
- Ms. Sarah Meagher, Energy Efficiency Deployment Office, Department of Energy and Climate Change, United Kingdom
- Mr. Rurik Holmberg, Swedish Energy Agency, Sweden
- Mr. Mikael Togeby, Ea Energy Analyses A/S, Denmark
- Mr. Joost Gerdes, ECN, the Netherlands
- Mr. Marc Friedrichs, Department of Energy, United States

Special thanks are also extended to Ambassador Richard H. Jones, Deputy Executive Director of the IEA, for his introductory words in opening the workshop and to Robert Tromop for his summary insights in closing. Last but not least, warm thanks go to Audrey Glynn-Garnier, Jenny Gell and Margaret Jones for assisting with logistical arrangements of the workshop.

Evaluating the Multiple Benefits of Energy Efficiency

On 14 March 2012, with the support of the Sustainable Energy Authority Ireland, the IEA held a workshop on *Evaluating the Multiple Benefits of Energy Efficiency* as part of IEA Energy Efficiency Week. This workshop explored the question of what the full range of benefits delivered by energy efficiency improvements might be and how these benefits might be evaluated.

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Introduction to Multiple Benefits

Improving energy efficiency can deliver a range of benefits to the economy and society. However energy efficiency programmes are often evaluated only on the basis of the energy savings they deliver. As a result, the full value of energy efficiency improvements in both national and global economies may be significantly underestimated. This also means that energy efficiency policy may not be optimised to target the potential of the full range of outcomes possible. Moreover, when the merit of energy efficiency programmes is judged solely on reduction in energy demand, programmes are susceptible to criticisms related to the rebound effect if the energy savings are less than expected. Such perceived failures should, in some cases, be viewed as achievements in terms of welfare or productivity gains.

There are several reasons why the full range of outcomes from energy efficiency policy is not generally evaluated. First, it is due to the non-market, experiential, nature of the socioeconomic benefits, which makes them difficult to quantify using traditional economic analysis. Second, it can be difficult to isolate the contribution of energy efficiency alone to these benefits. Third, evaluators and policy makers working in the energy efficiency sphere are usually energy professionals, working for an energy agency or ministry, with little experience of how energy efficiency might impact non-energy sectors. The result is an under-appreciation – and related under-investment – in energy efficiency, and as a consequence, missed opportunities and benefits. These foregone benefits represent the ‘opportunity cost’ of failing to adequately evaluate and prioritize energy efficiency investments.

Figure 1 • The Multiple Benefits of Energy Efficiency



Source: IEA

Introduction to Multiple Benefits

The March workshop drew together energy and other policy makers as well as policy modellers, key society stakeholders and academics to explore approaches to evaluation of the multiple benefits of energy efficiency. It aimed to:

- introduce the broader range of possible benefits of energy efficiency;
- examine the current state of energy efficiency policy evaluation in various IEA member countries;
- consider evidence of evolving evaluation approaches and identify opportunities for improvement; and
- seek feedback on the future direction of the IEA's project on the multiple benefits of energy efficiency.

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The Secretariat provided an overview of the range of possible benefits of energy efficiency based on its preliminary scoping work carried out as a first step in the new IEA project on this subject. A summary of this discussion, which outlined key benefits, identified and addressed some theoretical issues around the introduction of multiple benefits into energy efficiency policy, has been formulated into an Insights Paper, now published on the IEA website: <http://www.iea.org/publications/insights/name,26319,en.html>.

This was followed by presentations from evaluation and other experts with direct experience of several of the key benefit areas. Representatives from several IEA member countries, namely Denmark, Ireland, the Netherlands, New Zealand, the UK and the United States, gave a sense of the state of the art in evaluating energy efficiency benefits across IEA member countries, presenting the current state of energy efficiency policy evaluation in their respective countries. Participants also shared anecdotal evidence of evolving evaluation approaches as well as indicating various relevant studies already published, and shared ideas on opportunities and priorities for improvement. The workshop also provided the IEA Secretariat with an opportunity to get feedback on the future direction of its project.

Views from the Experts

Ms. Mirjam Harmelink, an experienced energy efficiency policy evaluator from Harmelink Consulting, provided a practical context in which to consider the potential for integrating multiple benefits into the process of evaluating energy efficiency policy. Her presentation gave an overview of classical policy evaluation frameworks and examined how one might integrate non-energy benefits into the normal programme/policy planning cycle of objective setting, portfolio design, programme design, implementation and evaluation. Mirjam outlined the various standard evaluation methods and discussed the choice between top-down and bottom-up approaches, suggesting that top-down methods are unlikely to offer adequate transparency. Theory-based approaches and logic modeling may be most appropriate to multiple benefit evaluation. Some key challenges stand out, particularly around how to set baselines for these benefits and how to separate autonomous improvements from policy impacts, but also in identifying suitable indicators. Mirjam emphasized the need for careful prioritization by governments, and the wisdom of the Tinbergen Rule: “for each and every policy target there must be at least one policy tool. If there are fewer tools than targets, then some policy goals will not be achieved”, as a warning to be clear about energy priorities.

Mr. William Baker, of Consumer Focus, a UK statutory consumer body with considerable experience of the social phenomenon of fuel poverty or energy poverty, provided an overview of the important role of energy efficiency policy in addressing this challenge. The three drivers of fuel poverty are energy inefficiency, high energy prices and low income. Energy efficiency policy has an important role to play and issues such as developing accurate definitions, assembling sufficient resources and targeting the 125 million people estimated to be in fuel poverty in Europe remain key challenges for policy makers. Some governments, such as the UK, are already integrating fuel poverty reduction into the objectives of energy efficiency policy, although there is concern that current policies should go further, given the poor condition of much of the UK's housing stock. Effective fuel poverty policies require increasing the energy efficiency of housing to a sufficiently high standard ("fuel poverty proofing") and coordinating energy efficiency, income & fuel price interventions to optimise fuel poverty outcomes. Conversely, some governments, such as Sweden, consider the fuel poverty issue to be firmly in the realm of social policy.

Ms. Veronique Ezratty from EDF and Mr. David Ormandy of Warwick University, shared their extensive experience with measuring the impact of energy efficiency on human health. They explained the major impact that excess cold and excess heat can have on health, and how the effect of climate change in exacerbating these extremes renders the issue increasingly pressing. In addition to their own project which was intended to compare the cost of energy efficiency measures with the estimated cost savings to society, Ezratty and Ormandy indicated the methodological limits of intervention studies. These generally suggest a positive correlation between energy efficiency and health improvements, although the impacts vary (Thomson et al, 2009). Also mentioned were the WHO LARES study (Ezratty et al, in Ormandy (ed) 2009) and the consistently positive results from studies in New Zealand (Howden-Chapman et al 2005 and 2007). An area of significant interest for several governments, some useful indicators have already been identified and complicating factors such as behavioral choices are being deciphered.

Ms. Julia Reinaud, of the Institute for Industrial Productivity, gave an insight into the range of multiple benefits for industry from improvements in energy efficiency and how they can enhance the business case for industry players to engage in energy efficiency by reducing the payback times for new investments. Julia provided several examples to show that multiple benefits often exceed the value of energy savings in the industrial context. Although there is no consensus method for quantifying the multiple benefits in industry, suitable approaches tend to begin with on-the-ground interviews and surveys, adapted on a case-by-case basis to the particular context. More elusive benefits such as improved employee morale might be quantified by use of proxies where available. The importance of clarify the value of energy efficiency in encouraging industry to implement measures a voluntary basis was discussed, along with the issue of balancing process efficiency against product quality. Tools and guidelines for measuring the multiple benefits will be needed to assist industrial energy managers and work underway in Australia to integrate them into energy management and auditing is likely assist with this.

Ms. Ingrid Holmes, of E3G (Third Generation Environmentalism), shared some preliminary outcomes of their work on the macro economic impacts of energy efficiency. Particularly in the context of the economic crisis, there is strong interest in investigating energy efficiency as a means to deliver energy security and economic resilience. There is evidence of the potentially significant influence that energy efficiency improvements can have on stabilising an economy's

inflation rates and creating economic growth, which is vital for generating foreign direct investment but also domestic investment. While energy efficiency could address cyclical and frictional unemployment issues, there is scepticism about estimating net employment effects in light of job losses and creation across borders in the globalised economy. Their experience suggests that analysis should be done on a country-specific basis, but that data-sharing is important and governments should be encouraged to capture data to support preliminary analyses. E3G work is seeking a line of communication to finance ministers, perhaps using a “killer statistic” that would summarise the range of macroeconomic impacts. This could take the form of a GDP growth factor correlated to energy efficiency increase at the national level.

Country-specific Perspectives

Ms. Christine Patterson, of New Zealand’s Energy Efficiency and Conservation Authority (EECA), explained the planning and evaluation steps involved in the recent “Heat Smart Programme” under *Warm Up New Zealand*. This programme, which supported residential energy efficiency improvements, targeted energy savings, with health benefits, employment and economic support among the anticipated outcomes. Christine showcased the well-developed evaluation approach taken in New Zealand, which measured a range of factors relevant to policy planning through 2-yearly evaluation using a range of methods done both internally and externally by contractors. One method was the Net Benefit Model which derives benefit to cost calculations based on computer modelling. Using assumptions for measuring and valuing energy, health and employment benefits encouraging numbers resulted, suggesting an cost-benefit ratio of at least 1:2, but likely greater. It appeared that over 90% of benefits related to health, which justified the shared financial burden with New Zealand’s Ministry of Health. Aside from energy savings, which are in fact limited, this programme created employment - of value to New Zealand during the recession - reduced carbon emissions, improved air quality and upgraded housing stock. New Zealand plans to develop the NBM to gradually include new benefits, and adapt it for use in relation to other EECA programmes.

Mr. Jim Scheer, of the Sustainable Energy Authority of Ireland, provided insights into his government’s experience in pursuing and communicating outcomes for energy efficiency policy. He emphasised how the policy messaging tends to evolve in step with the important public issues of the moment, and how energy efficiency has been able to speak to multiple issues. Although traditionally centred on energy (GWh) and CO₂ savings, Irish energy efficiency policy has also been discussed as a means to improving business competitiveness; increasing comfort, well-being and health, especially in low-income families, and increasing home values. Broadly, Ireland estimated the net societal benefit of its Better Energy scheme at €6 billion (May 2011). The Ireland’s public consider comfort gains as a close second to energy savings as a primary driver for investment in energy efficiency and 65% of Irish homeowners have reported the impression that the value of their property increases as a result. In the context of the recession, policy-makers have increased interest in jobs *supported* by energy efficiency as evaluation teams identify large employment potential through residential retrofit programmes. Evaluators generated a metric of 4 direct jobs supported per million Euros invested in energy efficiency technologies (public + private spend), along with an indirect jobs multiplier of 1.5. Ireland nevertheless seeks a more robust way to calculate directly created jobs. Mr. Scheer indicated that IEA guidance on best ways to extend ex-post evaluation of energy efficiency, beyond least-cost modelling which may not be well adapted to multiple benefit work, would be valuable, as well as on best approaches to enhancing data gathering to facilitate this.

Mrs. Sarah Meagher, of the United Kingdom's Energy Efficiency Deployment Office in the Department of Energy and Climate Change (DECC), outlined the UK's well-developed evaluation procedure for energy efficiency policy. Approaches used for evaluation vary depending on the benefit at issue, and impact evaluations tend to consider a broad range of impacts, always using the appropriate comparator/control group to assess the counterfactual. National Energy Efficiency Data-framework (NEED) is combined with other quantitative and qualitative inputs to generate an evaluation synthesis report for each policy approach. In the context of its *Green Deal*, the UK government assessed a range of projected benefits including energy savings; comfort benefits; air quality benefits; lifetime non-traded carbon savings; and lifetime EU Allowance and monetised each with different methodology. The avoided cost of investment in renewables was also considered. These extensive calculations do not take into account broader macroeconomic impacts. The health benefits arising from warmer homes have not been monetised, however the government has acknowledged the benefits generated in terms of physical health, excess winter death and stress, and work on a model for these aspects is underway. Fuel Poverty is also a particular concern for the UK, which has commissioned a review of the fuel poverty target and definition which have raised questions in the past. Evaluation of energy provider-delivered energy efficiency is also well advanced. A recent evaluation of the CERT and CESP programmes highlighted include energy savings, comfort taking, warmer homes and reduced energy bills, affordability of energy, economic benefits, aesthetic improvements, social benefits (this report can be found online <http://www.decc.gov.uk/assets/decc/11/funding-support/3340-evaluation-synthesis-of-energy-supplier-obligation.pdf>).

Mr. Rurik Holmberg, of the Swedish Energy Agency, provided an update on energy efficiency policy in Sweden, where responsibility for implementation has been divulged to the municipal level. Sweden has not yet developed a systematic methodology for evaluating multiple benefits of energy efficiency, but a preliminary assessment of their potential is being carried out across six sectoral programmes (local and regional EE advisors; the Sustainable Municipality programme; energy efficiency in industry and buildings; energy efficiency in transportation; products and systems; and the energy services market). The unreleased results of this study have identified a range of non-energy benefits in these areas, including promotion of rural development, development of small-scale business and competitiveness in industry, employment, reduction of socio-economic segregation. In transport sector in particular, benefits of improved public safety and improved health as a result of more physical exercise have shown up as areas where a strategy for data collection is needed and adapted methodologies for assessing the impacts of transport will need to be developed. This study has confirmed that classical evaluation methodologies will need to evolve in order to develop an understanding of the scope such benefits and, ultimately, how to integrate such considerations into future energy efficiency policy planning and evaluation.

Mr. Mikael Togeby, of the Danish agency Ea Energy Analyses A/S, explained that Denmark has established procedures for evaluation of energy efficiency programmes. These tend to draw heavily on participant experience through questions about the overall satisfaction, interviews based on experience with concrete projects; use of control groups, and a focus on net impact (free riders) due to an assumption that the end-user has a critical role to play in identifying and evaluating multiple benefits. Evaluation has had a massive impact on Danish energy efficiency policy and a new project has been commissioned to look more closely at multiple benefits, particularly in the context of industrial energy efficiency programmes. Industrial managers already include all kinds of benefits when deciding what to invest in. End-users generally are well-qualified to identify multiple benefits, especially those which often involve a subjective element,

such as improved aesthetics, usability and comfort and these can be effectively evaluated on the basis of “willingness-to-pay”. Mr. Togeby discussed a case study on energy efficiency measures implemented to improve the production of liquid gas, where calculations of pay back periods done on the basis of energy savings alone would be 3.6 years, while inclusion of multiple benefits of energy savings, chemical savings and reduced labour costs led to a pay-back time of only 0.5 years. Energy savings should nevertheless remain a central focus of energy efficiency policy.

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Mr. Joost Gerdes, of the Dutch energy research centre ECN, explained that energy efficiency evaluations in the Netherlands have remained guided by an assessment of the complete energy system including primary energy. ECN has attempted to consider net benefits from this perspective using a top-down approach and a decomposition analysis. ECN evaluators have started with a counterfactual of where energy consumption would have been if it had followed GDP growth, then checked how activities in different sectors have developed in fact, and finally considered how energy consumption has deviated from activity developments (to name the three most important parts of the decomposition into volume, structure and savings effects). Attention has been paid to long term agreements with industry including energy efficiency elements, where improvements in competitiveness were identified early. Reductions in carbon dioxide as a result of energy savings have been determined as a matter of course. While ECN agrees that a range of multiple benefits may arise as beneficial side effects of energy efficiency improvements, they primarily see energy savings as a driver for reductions in CO₂ emissions, of increases in the share of renewable energy, in competitiveness and in energy security. Due to lack of reliable data, ECN has not studied the rebound effect to date.

Mr. Marc Friedrichs, of the United States Department of Energy, summarised the multiple potential benefits of energy efficiency in the context of US energy efficiency policy. The US assesses these using a mix of quantitative and qualitative methods across various energy efficiency programmes, keeping in mind the overall objectives of a particular policy. Mr. Friedrichs identified a range of different benefits including, environmental impacts, carbon emissions reductions, health, asset values, supporting local product markets and productivity which can be seen arising from energy efficiency programmes, depending on the perspective taken. Employment and economic stimulus have been driving forces behind energy efficiency policy initiatives in recent years and efforts have been made to evaluate the net impacts of these programmes on these non-energy areas. Interesting results are being obtained through evaluation of the low-income Weatherisation Assistance Program where job creation and health were among key non-energy benefits targeted for evaluation, with encouraging results. Noting how important cost-benefit assessment are in guiding energy efficiency investment, Mr. Friedrichs emphasised the need to evaluate negative impacts of energy efficiency along with the positive impacts in order to avoid overselling energy efficiency and erode support for the essential energy savings aspects of an energy efficiency programme.

Key Messages Received

This workshop allowed the IEA to draw on the knowledge and experience of a range of policy and academic experts, in relation to several questions which have emerged in IEA work so far. These were:

- **What is the relationship between energy efficiency and its wider economic, environmental and social benefits?**

Workshop participants were enthusiastic in confirming that there is adequate evidence, both formal and anecdotal, of energy efficiency delivering more than just energy savings. They agreed

that a greater investigation of the benefits of energy efficiency, beyond energy savings, is overdue.

When communicating the value of energy efficiency to policy makers, it is necessary to include issues which resonate for them in light of the concerns of their constituents. Where energy savings may not rate highly, particularly when communicating with non-energy ministries, energy efficiency practitioners could take the opportunity to highlight the relationship of energy efficiency with other key political issues such as job creation and economic growth.

A common challenge has been how to communicate the value of multiple benefits in a way that is credible from the point of view of national treasuries. It is essential that the numbers generated are robust and that benefits are placed in the context of broader economic effects. More data and innovative indicators are needed to bring measurement of many multiple benefits to the standards set by national treasuries.

It was also valuable to recall the wisdom of the *Tinbergen Rule* which states that “for each and every policy target there must be at least one policy tool. If there are fewer tools than targets, then some policy goals will not be achieved”. This reminds us that unrealistic expectations should not be placed on the ability of an energy efficiency policy to resolve a plethora of policy objectives. Energy efficiency policy should remain focused on delivering energy savings as its primary objective. Nevertheless, energy efficiency policies can be optimised to maximise the range of other benefits they generate, according to the priorities of a particular country.

- **Which benefits do we already measure in evaluation of energy efficiency policy? And what methodologies are used?**

Workshop participants showcased a broad range of multiple benefits which have been identified and occasionally integrated into energy efficiency policy evaluation in IEA member countries. Non-energy benefits that have already begun to emerge in the energy efficiency discussion in member countries are: health improvements; employment effects; industrial productivity; and carbon emissions reduction. These have been measured using a variety of methods, some more robust than others. There was general agreement on a range of other, generally harder to measure, benefits that merit increased evaluation efforts, such as increased comfort and well-being; improved aesthetics; increased social integration; and, most importantly, economic stimulus and GDP growth. It is clear that the scope of the possible benefits is very large and can appear impossible to capture, but participants agreed that, in order to gauge the true value of these, evaluators should start analyzing the policies one by one.

Classical evaluation methodologies will need to evolve to adapt to the particular characteristics of these various, sometimes intangible, often non-energy, benefits. A new theoretical framework will be needed and new sources of data identified. Sharing of expertise across disciplines will also be essential. Several countries, New Zealand, the United Kingdom and Ireland in particular, showcased progress developing adapted evaluation procedures and lessons could be taken from their experience.

While it is important to find innovative way to monetise the benefits, such as by using proxies for hard-to-measure benefits, Mr. Jim Scheer from Ireland pointed out that evaluators should take care in routinely applying a *least-cost* policy evaluation standard. This may not be the best-fit for multiple benefits which could have an underappreciated social value that would tip the normal cost-benefit balance. Mr. Scheer suggested that what he termed a *best-cost* approach, which pays more attention to benefits, both quantified and qualitative, may be more appropriate in these cases.

It emerged that a bottom-up approach is likely to be the best fit for socio-economic benefits, in order to ensure that end-user experience is fully captured and properly valued. Mikael Tøgeby emphasised the Danish view that information gathered directly from end-users can play a critical role in identifying and evaluating multiple benefits. This approach, focusing on the use of participant surveys and interviews, has been used with some success in Denmark, and may be useful for other countries also.

- **How should we deal with the rebound effect in the context of socioeconomic benefits of energy efficiency?**

The rebound effect remains an important criticism of energy efficiency approaches. As energy savings delivered by energy efficiency programmes are sometimes lower than expected, many workshop participants agreed that a better understanding of the reason for and implications of the rebound effect is needed. A clearer link to the welfare gains associated with fewer energy savings could provide lessons about how to better target energy efficiency policies and programmes.

If the multiple benefits of improvements in energy efficiency can be identified as drivers of the rebound effect, this could provide a useful interpretation of the rebound effect that would be of interest to policy makers and to treasuries making budget allocation decisions. It might also reduce the importance of the rebound effect in communicating on energy efficiency. Conference participants suggested that further IEA work on the nature of rebound, offering opportunities to rationalise it, would be valuable.

- **Are there priority benefits that require immediate attention?**

Participants expressed interest in a range of multiple benefits, but several benefits stood out as the most pressing for further investigation. Those benefits which are already receiving some attention from energy efficiency policy makers and evaluators still require urgent work to consolidate the preliminary indications which are emerging so far. Health impacts, particularly of residential energy efficiency improvements, again stood out as an instance where knowledge is developing fast, but requires greater dissemination. An exemplary case was described by Ms. Patterson from New Zealand, where health impact evaluation has led to cooperation and cost sharing between energy and health ministries.

The importance of tying the various benefits to a macro-economic assessment was reiterated by many. Evaluating multiple benefits at the economy-wide level is difficult and targeted work is underway in several countries in an attempt to elucidate a method for moving forward on this. Macro-economic impacts of various lower-level benefits, amalgamated and translated into one easily communicable figure, such as relational impact on GDP, could perhaps provide a “killer statistic” to encapsulate the value of energy efficiency. Work is underway on this, for example within E3G, and countries may merit from combining this with an evaluation of national net benefits *i.e.* producer/consumer approaches and impacts on national spending and budgets.

It is clear that different drivers affect energy efficiency policy outcomes in different communities, and analysis will need to be done on a country-specific basis. Industrial multiple benefits are also not well-understood or documented and could be important in convincing industrial companies of the value of investing in energy efficiency.

Another important consideration that emerged from workshop discussion was the relationship of energy efficiency improvements with national renewable energy targets. Several participants highlighted the need to assess the impact that energy efficiency has as a least cost way to meet

renewable energy generation targets (as a percentage of total energy generation) and how this can be communicated as an additional benefit, taking into account any risk that energy efficiency measures might stifle market transformation towards greater renewable energy capacity.

• What should the IEA project investigate?

As a result of a rich day of discussion, the IEA Secretariat arrived at a list of benefits which appear to merit priority attention. These were:

- Health improvements (including mental health and wellbeing)
- Industrial productivity benefits
- Economic growth
- Consumer spending
- Public budget outlay

This list is not exhaustive but should guide the IEA as it moves ahead with its multiple benefits project. The IEA is seeking working and funding partners, and the above-mentioned priorities may evolve as a result of discussions with those partners.

Although the issue of employment effects surfaced as key for many governments, it was also agreed that there are particular difficulties in drawing causal links and generating reliable numbers in this area. Accordingly, IEA expertise may be best concentrated elsewhere at present.

Governments indicated that they would benefit from an indication of which benefits merit increased attention, and also on the most effective methodologies for assessing them. Benchmarking data is also urgently needed to inform the process of policy and programme design from the outset.

In moving forward, the IEA should be sure to remain objective by incorporating evaluation of negative impacts of energy efficiency improvements along with positive impacts. It is important not to oversell energy efficiency and risk eroding support for the energy savings aspects of energy efficiency policies, which remain the central goal.

Indicative Future Workplan

Phase	Policy maker output	Date and cost
<u>Phase 1: scoping and overview</u> - Analysis of literature and appraisals - Scoping workshop on multiple benefits of EE	i. Report identifying range of benefits, evaluation methods and estimates ii. Communication on socioeconomic potential of EE iii. Proposal for 2 year work plan with focus benefits	November 2012
<u>Phase 2: analysis</u> - Develop methodology - Data collection - Identification of evaluation methodologies - Analysis of data - Country-centered workshops	i. <i>Information Paper</i> on in-depth focus benefits ii. <i>Information Paper</i> on development of evaluation methodologies	March 2013
<u>Phase 3: publication and dissemination of results</u> - Write up findings - Develop dissemination strategy - Develop tools for policy makers	i. Chapter-by-chapter analysis of full range of multiple benefits (book form) ii. Policy toolkit with multiple benefit estimator (Excel and webformat) iii. Awareness-raising plan to mobilise stakeholders behind EE	October 2013

Opportunities to participate

A key objective of this workshop, and the IEA's work generally, is to share information between countries and experts on documented outcomes of energy efficiency improvements across all sectors. The Secretariat is actively seeking working partners and co-funders to participate in this new project and a variety of opportunities to participate exist. These include:

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- Becoming a **project co-funder**, providing financial support and becoming a member of the steering committee with a voice on project direction, as well as the possibility of calling for country-specific case studies.
- Becoming a **working partner**, providing in-kind contributions, such as undertaking some part of the work planned, and becoming a member of the steering committee with a voice on project direction.
- Contributing **evaluation studies which may have been carried out internally in member country ministries**, which could inform the IEA's work. We do not propose to critique these studies or results, but would simply use them to enlarge our understanding of how ministries are approaching the subject so far. Any such material would of course be held in confidence unless otherwise agreed.
- Joining the **multiple benefits expert group**. The IEA will communicate project findings and facilitate the exchange of country analysis and results by coordinating a network of experts and hosting regular expert workshops. We have begun building a standing contact group of multiple benefits experts to facilitate the exchange of new studies, share updates about the IEA's work in this area, and obtain feedback going forward.

If you would like more information about the project, or to discuss participating the project through one of the above-mentioned avenues, the IEA would like to hear from you. Please contact Lisa.Ryan@iea.org or Nina.Campbell@iea.org.



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