Concept Note

Workshop: Policy Maker Meets the Engineer

United Nations Economic Commission for Europe

Group of Experts on Energy Efficiency

Face to face with the everyday barriers that continue to restrict Industrial Energy Efficiency implementation

Enabling policy makers to hear and learn directly from the people who are responsible for implementing energy efficiency projects within their companies

Summary

COP 21 in Paris gave the world a new challenge: Limit global warming to 1.5°C. Do we really realise how much needs to change within the industry sector, and how quickly, to help achieve this target?

Before COP21 we had until 2035 to continue with current emission levels before enough CO_2 would be in the atmosphere to bring about a 2°C increase in global warming. Suddenly, however, for a 1.5°C increase this timeline reduces from 2035 to just 2020[1]. A date that is now just 4 years away.

With Industry's energy requirements responsible for over a quarter of all global CO_2 emissions, it is clear that reducing energy consumption within this rapidly growing sector is of considerable importance to helping achieve the COP21 targets. Energy efficiency has the potential to deliver up to 40% of the global emission reductions. However, even specifically designed policies have not managed to overcome all the everyday barriers that continue to restrict widespread uptake of this more often than not financially feasible solution[2].

This series of workshops aims to reconsider how to develop industrial energy efficiency policies through a bottom up approach, by bringing together two very different sets of stakeholders. These being key national policy makers with experience of energy efficiency policy and programmes, and people from industry who have direct experience of implementing engineering solutions for energy efficiency gains. The overall objective is that policy makers hear from those who are directly involved on the ground and who have to face the everyday corporate, financial and basic engineering barriers related to implementing widespread energy efficiency measures within a manufacturing site.

The workshop series will begin with an introduction to the topic during the Seventh International Forum on Energy for Sustainable Development in Baku on 18-21 October 2016. This will introduce the workshop objectives and provide an opportunity for feedback from participants to create the basis for the main workshop event in Geneva on 18 January 2017. A second workshop will then be

[1] See http://www.carbonbrief.org/six-years-worth-of-current-emissions-would-blow-the-carbon-budget-for-1-5-degrees and http://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR_AR5_FINAL_full_wcover.pdf

[2] See http://www.iea.org/etp/etp2014/ and http://www.iea.org/etp/etp2016/

held within the framework of the Eighth International Forum on Energy for Sustainable Development in Astana (11-14 June 2017).

Context

The stark reality today is that, in order to be able to meet the COP21 targets, global emissions need to peak as soon as possible. This will require emission reduction actions that are implemented much faster and more effectively than has been the case to date. Industry is a sector that will continue to grow rapidly in order to contribute to the expected 88% global economy growth by 2050. As a result, the challenge today is to develop policies that will reduce both industry's energy consumption and energy related CO_2 emissions considerably quicker than the rate of economic growth.

While there are already many innovative and effective industry CO_2 emission reduction policies in place, the fact remains that numerous barriers still remain in the way of achieving the speed of change required to meet the COP21 targets. In order to improve the effect of policies on industry's emission reduction activities, we need to therefore first hear from those who experience the barriers first-hand. Only when we understand the very practical reality of how it all works on the ground within the industry environment, can we then develop policy solutions from the bottom up that work effectively in overcoming the barriers to rapid reduction of CO_2 emissions.

Very often the line of communication between policy makers and industry only goes as far as corporate level within companies. With companies already facing a common struggle to connect current internal corporate sustainability strategies with operational reality, it can be seen how a large compatibility gap between policy design and practical application can easily occur. Such a situation then results in unnecessary complications and barriers for manufacturing sites trying to implement policy driven projects in which they had little part in designing[3].

To create effective policy that will lead to rapid and consistent industrial CO_2 emission reductions, we must first hear from the operational people who will ultimately have to implement it on the ground. Bringing the right people together, the policy makers and the policy users, will provide invaluable insight on barriers, and, most importantly, on ideas how to overcome them.

Save before you begin to change: The case for energy efficiency

Industrial CO_2 emission reduction actions can be divided into two broad directions, produce more with less energy and use energy that does not produce CO_2 emissions. Both are important actions. The key, however, is their sequence. Before we consider changing our energy source, we should first avail of all opportunities to reduce our energy consumption. It is easier and cheaper to change energy sources when there is less to change.

Energy efficiency is already frequently implemented to various degrees by many companies, in particular by those in energy intensive industry sectors. Yet, common priority actions from industry to reduce CO_2 emissions in line with their sustainability targets have often been the purchase of green electricity and on-site production of renewable energy. These are in most cases relatively easy measures to implement and have generally served to satisfy corporate sustainability targets to date. However, moving ahead beyond industry's 2015-2020 targets, and taking into account the effect of the COP21 targets, neither of these measures continue to provide complete emission reduction solutions for industry due to availability and cost issues.

[3] See https://www.iea.org/publications/freepublications/publication/Boardroom_perspective.pdf

Taking a step back and applying a stronger focus to energy efficiency, industry can achieve a multitude of benefits not possible through energy source changes alone. For example, reducing energy use as a first step means there is greater opportunity to cover the remaining energy use through cost effective renewable energy sources. In addition, energy efficiency is most easily achieved through systematic energy management, and this in turn will deliver a range of side-benefits, including reduced maintenance costs and improved quality[4]. And this is of course all in addition to the simple reductions in energy costs.

As energy efficiency generally makes clear financial and strategic sense for a company, policy development needs to especially take this perspective into account. Availing of input from those who routinely deal with internal company investment processes required for energy efficiency projects, is in this case, key for policy makers.

To realistically be able to achieve the 40% emission reduction potential energy efficiency offers, it must become as integral and important to company operations as quality management and lean manufacturing are already today. With time being the crucial factor for the success of the COP21 targets, we will need innovative and proactive policies designed by policy makers and users together.

[4] See http://www.iea.org/publications/freepublications/publication/capturing-the-multiple-benefits-of-energy-efficiency.html