# REDUCING THE CLIMATE FOOTPRINT

*The EU's legislative framework and the healthcare sector*

Health Care Without Harm

# ABBREVIATIONS

| | |
|---|---|
| **AEAs** | Annual Emission Allocations |
| **CoM** | Covenant of Mayors |
| **CO2** | Carbon dioxide |
| **EPBD** | Energy Performance of Buildings Directive |
| **EED** | Energy Efficiency Directive |
| **EFSI** | European Fund for Strategic Investment |
| **ERDF** | European Regional Development Fund |
| **ESD** | Effort Sharing Decision |
| **ETS** | Emissions Trading Scheme |
| **GHGs** | Greenhouse gases |
| **GPP** | Green Public Procurement |
| **LULUCF** | Land Use, Land Use Change and Forestry |
| **nZEB** | Nearly-zero energy buildings |
| **TFEU** | Treaty on the Functioning of the EU |
| **UNFCCC** | United Nations Framework Convention on Climate Change |
| **WHO** | World Health Organization |

ACKNOWLEDGMENTS

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**Published:** 31 December 2014

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## INTRODUCTION

# CLIMATE CHANGE – THE DEFINING ISSUE FOR HEALTHCARE

The healthcare sector is a major component of the European economy. At around 10% of Gross Domestic Product in many EU countries, the sector is a very large employer and requires high levels of energy supplies[1]. Inevitably, the sector has a considerable carbon footprint. The approximately 15,000 hospitals of the EU require energy for power generation, heating, lighting, ventilation and air conditioning, electrical equipment, transport and supplies. Together with their supply chains, hospitals are estimated to account for roughly 5% of the EU's carbon dioxide emissions per annum[2].

Given the scale of the industry, the healthcare sector clearly has a role to play in helping the EU meet its commitments to a low carbon agenda. While there is a lack of systematic effort to 'green' hospitals and other care centres, there is growing awareness of the impact of healthcare and indeed some fine examples of action at particular facilities. There is much scope for improving energy efficiency, applying low carbon criteria to procurement decisions, installing renewable energy generators and influencing transport decisions. Many low carbon options can improve not just the carbon footprint but can help make a facility more resilient when faced with rising energy costs and increasing demands on services.

For decision-makers and managers wanting to engage in reducing emissions, there is a broad legislative framework within the EU that can be called upon. The aim of this report is to provide an overview of the current EU legislation which sets targets up to 2020 (the 2020 Climate and Energy Package)[3] in order to reveal its current influence on EU hospitals and other healthcare centres. This reveals a host of options for the healthcare sector which could spur action.

The report also looks at the prospects for the renegotiation of the package to 2030, which is currently in progress. The cornerstones of the post-2020 climate and energy policy framework have been agreed at the 2014 October European Council[4] and legislative proposals are now being developed by the European Commission.

Critically, political agreement is needed before the UN climate change negotiations in Paris in 2015 for the EU to best engage in negotiations there. In addition, the sooner the 2030 targets are embedded into the EU legislative framework, the better for investor confidence in the energy sector.

To avoid the most severe impacts of climate change, the international community has agreed that warming should be kept below 2 degrees as compared to the temperature in pre-industrial times. In 1992, the UN agreed a Framework Convention on Climate Change (UNFCCC) and preventing 'dangerous' climate change is a strategic priority for the European Union. The current legal framework sets three key objectives to be achieved by 2020:

- a 20% reduction in EU greenhouse gas emissions from 1990 levels;
- raising the share of EU energy consumption produced from renewable resources to 20%;
- a 20% improvement in the EU's energy efficiency.

These targets look set to become more ambitious generally speaking looking towards 2030; however much will depend on the eventual detail.

The following chapters present a legal analysis of the EU legislation. The first chapter will investigate to what extent the current framework under the 2020 Climate and Energy Package directly or implicitly affects the healthcare sector, encouraging it to become more energy efficient and implement cleaner energy strategies.

With the October 2014 Council Conclusions in mind, the second chapter attempts to project

the possible impact of the forthcoming 2030 climate and energy legislative package on the healthcare sector's future role in reducing its energy-related carbon footprint. The analysis concludes with a set of high level policy recommendations (Chapter 3) on how the 2030 framework can enhance the healthcare sector's commitment to reducing energy-related greenhouse gas emissions.

The mission of Health Care Without Harm is to transform the health sector worldwide, without compromising patient safety or care, so that it becomes ecologically sustainable and a leading advocate for environmental health and justice. This report, carried out with the important contribution by ClientEarth, is part of Health Care Without Harm's work in Europe to raise awareness and advocate for stronger action on climate change and also to help lead the health sector's response to climate change.

## *Some consequences of climate change*

Evidence is linking climate change to serious consequences for health and well-being, including diseases and injuries caused by extreme weather events, freshwater shortages and droughts, compromised food security, changing distributions of infectious diseases, and loss of livelihoods and displacement of people.[5] According to a recent World Health Organization (WHO) assessment,[6] between 2030 and 2050, climate change is expected to cause approximately 250,000 additional deaths per year worldwide just from malnutrition, malaria, dengue, diarrhoea and (focussing on the elderly only in that particular study) heat stress.

While the impacts of changing climates will not be evenly distributed around the world, Europe will certainly be affected. Rising sea levels alone will challenge many cities and towns; the heat waves of 2003 and 2010, which resulted in tens of thousands of extra deaths and significant crop damage, showed what harm may be caused by an increasing frequency of such events.

Dr Margaret Chan, Director-General of WHO, recently stated that, for public health, climate change is *'the defining issue of the 21st century'*.[7] Whilst that comment was in the context of challenges to health services in a changing world, it also serves as a reminder of what is at stake if greenhouse gas emissions are not controlled.



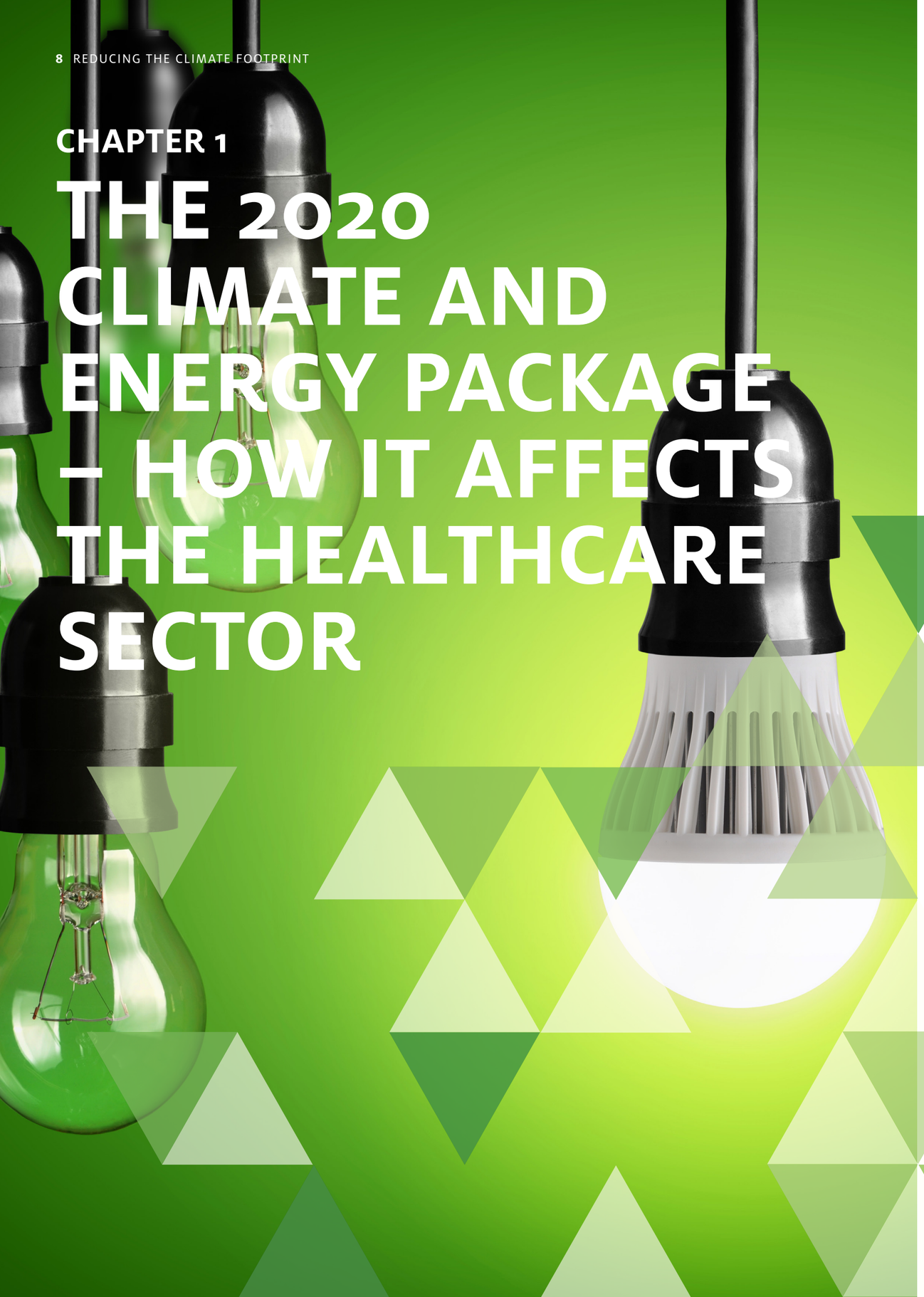
## *Cutting emissions: a win-win situation*

In September 2010, HCWH Europe published a report together with the Health and Environment Alliance: *'Acting Now for Better Health – a 30% reduction target for EU Climate Policy.'*[8] The analysis made the case for the European Union to increase its 2020 20% domestic greenhouse gases emissions reduction target (compared to 1990) to 30%.

More specifically, the study estimated the benefits to health of avoiding air pollution by reducing emissions of fine particles, nitrogen oxides and sulphur dioxide (which are closely linked to $CO_2$ emissions from combustion of fossil fuels, e.g., during power generation and use of fuel for transport).

The health impacts looked at included reduced cases of chronic bronchitis, asthma and other respiratory problems, with reduced lost working days, hospital admissions and mortality. It was calculated that such extra health co-benefits would be worth between €10.5 billion and €30.5 billion per year by 2020 (if action began in 2010).

The health co-benefits could go a long way towards matching the costs of achieving a 30% target. The European Commission had estimated the additional cost of achieving a 30% target as €46 billion per year by 2020. But even further benefits (unquantified in the 2010 study) would also accrue to health from low carbon policies. For example, promoting walking and cycling could increase physical exercise, while at the same time reducing emissions and improving levels of air pollution. Also note that the benefits of avoiding direct impacts of climate change, such as injury and deaths from flooding and heat waves or damage to agriculture and ecosystems, were not taken into account in the exercise.



CHAPTER 1

# THE 2020 CLIMATE AND ENERGY PACKAGE – HOW IT AFFECTS THE HEALTHCARE SECTOR



The 2020 Climate and Energy Package is based on three headline targets on climate and energy. In March 2007, the European Council agreed to:

- Reduce greenhouse gas (GHG) emissions by at least 20% by 2020;[9]
- Ensure that 20% of energy consumption comes from renewable energy by 2020; and
- Achieve a 20% cut in primary energy use compared with projected levels by improving energy efficiency.[10]

The Package includes secondary EU legislation to deliver the 2020 targets, including:

- the Emissions Trading System Directive
- the Effort Sharing Decision
- the Renewable Energy Directive
- the Fuel Quality Directive,
- the Directive on Emissions Performance Standards for Vehicles,
- the Clean Vehicles Directive, and
- the Directive on Carbon Capture and Storage.

These instruments are complemented by further strategies and legislation – for instance the 2011 Energy Efficiency Plan and associated legislation that govern energy efficiency, as well as public procurement. These instruments are assessed in this report for their potential to influence the healthcare sector.[11] Table 1 below gives a very brief summary of the legislation discussed here.

The 2020 Package is largely directed at Member States.[12] Together, it provides a framework of minimum rules that must be implemented at national level. Under the Treaty on the Functioning of the EU (TFEU), energy is a shared competence – or responsibility – between the EU and the Member States. Therefore, while the EU acts as a harmonising force, Member States retain significant control over energy issues. The extent to which the healthcare sector is affected by EU legislation depends significantly on national level transposition and implementation. Under the Renewable Energy Directive, Energy Efficiency Directive (EED) and Energy Performance of Buildings Directive (EPBD), it is often up to the Member State to decide what policies and measures to implement in order to fulfil legislative requirements. Where this is the case, Member States must account for such policies and measures to the Commission through planning and reporting processes.[13]

In practice, national level transposition, implementation and reporting may be weak or incomplete.[14] In such cases, the Commission has authority under Article 258 and 260 of the TFEU to begin infringement proceedings and enforce Member State compliance.[15] However, the Commission has wide discretion to use this authority and it often chooses not to use it. Therefore, it is important for actors (e.g., from the healthcare sector) that may be affected by such legislation to place political pressure on relevant authorities.

**Table 1**
Overview of relevant secondary EU legislation under the 2020 climate and energy package

| LEGISLATIVE INSTRUMENT | PURPOSE/AIM |
|---|---|
| **Emissions Trading Directive (Directive 2009/29/EC)** | Sets a cap, or limit, on the total amount of GHG emissions that can be emitted by industrial installations that are covered by the Directive. Within the cap, regulated entities can receive or buy emissions allowances that they can trade with each other, as well as buy international emissions credits. Each year, regulated entities must surrender a certain number of allowances to cover their emissions. |
| **Effort Sharing Decision (Decision No 406/2009/EC)** | Covers economy-wide GHG emissions (e.g., transport, buildings, waste, agriculture) not covered by the ETS Directive. Establishes individual national GHG emissions targets for 2020, expressed as percentage changes from 2005 levels, which are distributed based on Member States' GDP per capita. Member States are then responsible for defining and implementing national policies and measures to meet their targets. |
| **Renewable Energy Directive (Directive 2009/28/EC)** | Sets rules for the EU to achieve its 20% renewable energy target by 2020. It requires Member States to meet individual targets and to ensure that at least 20% of transport fuels come from renewable sources by 2020. It aims to establish investor certainty for renewable energy by providing a framework for Member States to provide support and to reduce administrative burdens for new installations. |
| **Energy Efficiency Directive (Directive 2012/27/EU)** | Establishes binding measures to help the EU meet its 20% energy efficiency target by 2020. Member States must establish plans for how they intend to meet national targets, which include measures and policies designed to encourage energy savings from industry and consumers, as well as long-term national building renovation strategies. It also provides special provisions encouraging the public sector take a leading role in building renovations, as well as purchasing of energy efficient buildings, products and services. |
| **Energy Performance of Buildings Directive (Directive 2010/30/EU)** | Supplements the Energy Efficiency Directive and is designed to reduce energy consumption of buildings. Requires Member States to establish a system of energy performance certificates for buildings, inspection schemes for heating and cooling systems, set minimum energy performance requirements for new buildings, and develop national measures to finance energy efficiency improvements. It also requires all new buildings to be nearly zero-energy buildings by 31 December 2020 (public buildings by 31 December 2008). |
| **Energy Labelling Directive (Directive 2010/30/EU)** | Establishes a harmonised framework of measures to provide end-use consumers with information on energy-related products so they can make better purchasing decisions. It introduces a series of 'energy classes' for different 'product categories' covered by the Directive, leaving detailed rules on particular products to be established by the Commission. |
| **Ecodesign Directive (Directive 2009/125/EC)** | Aims to harmonise ecodesign requirements for energy-related products and to ensure that manufacturers take the product's energy consumption and other negative environmental impacts into account at the design stage. For different product categories, where it is possible to increase energy efficiency and lower energy use minimum standards are established. More detailed requirements for individual products are established by the Commission. |
| **Fuel Quality Directive (Directive 2009/30/EC)** | Establishes technical specifications for fuels used in road vehicles and a target for the reduction of life cycle GHG emissions. Establishes a Low Carbon Fuel Standard, which requires fuel suppliers to reduce the GHG intensity of energy supplied for road transport. It also establishes sustainability criteria for biofuels. |
| **Clean Vehicles Directive (Directive 2009/33/EC)** | Aims to promote a market for environmentally friendly vehicles. Requires energy and environmental impacts linked to the operation of vehicles over their lifetime to be taken into account in all purchases of road transport vehicles covered by the Public Procurement Directives. |
| **Public Procurement Directives (Directive 2014/24/EU on public procurement and repealing Directive 2004/18/EC; Directive 2014/25/EU on procurement by entities operating in the water, energy, transport and postal services and repealing Directive 2004/17/EC; and Directive 2014/23/EU on the award of concession contracts)** | These establish a common framework of rules for procedures that contracting authorities must follow when making procurement decisions, to ensure an internal market for products and services. The Public Procurement Directives are outside the 2020 Climate and Energy Package. Nevertheless, they allow contracting authorities to incorporate life cycle costing and product process impacts in deciding a 'most economically advantageous tender', the use of environmental and social criteria in tenders. They provide a role for certification and labelling schemes in helping prove that desired environmental or social characteristics of technical specifications and tender award criteria have been met. |

## THE FRAMEWORK FOR REDUCING GREENHOUSE GAS EMISSIONS

The EU's commitment to achieve a reduction of at least 20% of its GHG emissions by 2020 is primarily operationalised through two instruments:

1. The EU Emissions Trading System (ETS) Directive,[16] which primarily covers industrial GHG emissions; and
2. The Effort Sharing Decision (ESD),[17] which covers economy-wide emissions, making up just over half of the 20% GHG emissions target for 2020.

Explained in more detail below, these instruments have direct and indirect impacts on the healthcare sector.

### THE EMISSIONS TRADING SYSTEM

The ETS Directive is the cornerstone of the EU's GHG emissions reduction policy, covering approximately 45% of total GHG emissions from the EU. Launched in 2005, it aims to reduce industrial GHG emissions, for example from power stations and other combustion plants. The ETS initially covered only $CO_2$ emissions, but after legislative reforms contained in the 2020 Climate and Energy Package,[18] it was expanded to other emissions and sectors.

The ETS establishes a cap on the total amount of covered GHGs that regulated entities can emit. The idea is that the cap should reduce over time so total emissions fall. Within the cap, regulated entities receive or buy emissions allowances that they can trade with each other. They are also allowed to buy international emissions credits. Each year, regulated entities must surrender a certain number of allowances to cover their emissions. If a regulated entity fails to do so it is penalised through fines.

Under the original ETS Directive, some hospitals that produced energy on-site (e.g., through emergency generators and boilers that exceed 20 MW thermal rated output) were covered by the ETS.[19] However, there were concerns that as the cap adjusted downward over time administrative costs of compliance would be excessive for many hospitals, as it would be difficult to adjust commercial practices or pass costs on to consumers.

Under the 2009 ETS Directive, Member States may exclude hospitals from participating in the ETS if they undertake 'equivalent measures', for instance through taxation of $CO_2$ emissions.[20] The amendment aimed to reduce administrative burden and simplify hospitals' efforts to reduce GHG emissions. According to official ETS guidance, the Commission must be notified, and the hospital must present evidence to the competent authority that providing hospital activities is the main purpose of the installation in question.[21]

### THE EFFORT SHARING DECISION

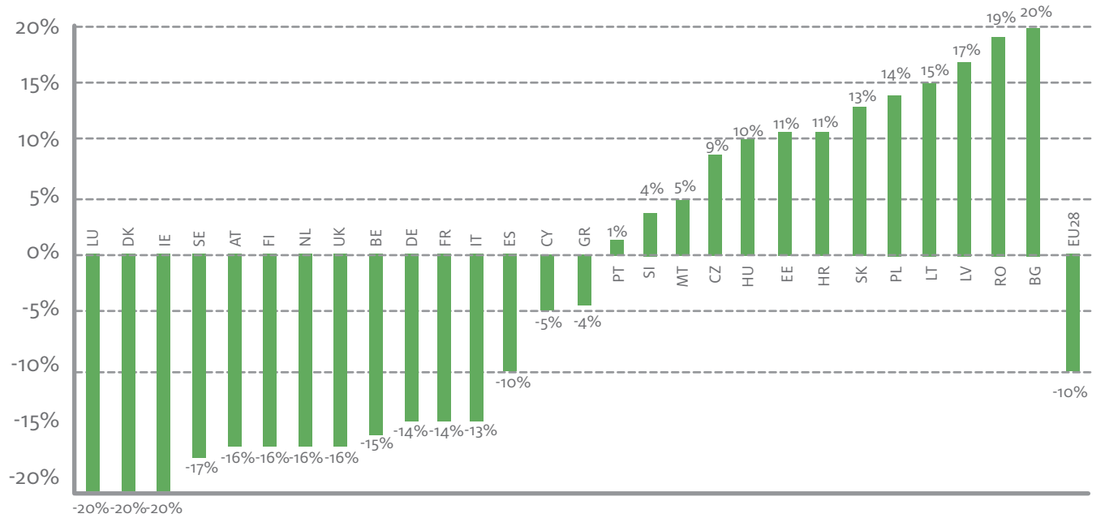
The ESD covers economy-wide GHG emissions not covered by the ETS Directive. Important for the healthcare sector, the ESD covers transport, buildings, waste and agriculture.

The ESD establishes national GHG emissions targets for 2020, expressed as percentage changes from 2005 levels (see Figure 1). The individual national targets are distributed among Member States based on their GDP per capita. Therefore, wealthier Member States shoulder a larger burden for reducing emissions, while less wealthy Member States may be able to increase emissions. Each Member State is assigned Annual Emission Allocations (AEAs) from 2013 - 2020. By 2020, the national targets should collectively deliver around 10% of total EU emissions reductions.

Member States are responsible for defining and implementing national policies and measures to meet their targets. Such measures may include shifting from fossil fuel-based transport fuels, ambitious energy performance standards for buildings, increasing efficiency for heating systems, and integrating renewable energy systems for power and heating and cooling. These national level measures are complemented by EU legislation (e.g., setting energy efficiency standards, limits on $CO_2$ emission from vehicles and waste management).



## MEMBER STATE GREENHOUSE GAS EMISSION LIMITS IN 2020 COMPARED TO 2005 LEVELS




*Source: DG Climate Action*[22]

**Figure 1**. Member State greenhouse gas emission limits in 2020 compared to 2005 levels

To enhance overall cost effectiveness, Member States are eligible to use a number of flexibilities, including carrying over AEAs between years, trading unused AEAs with other Member States, and using international offsets[23] generated by projects under the Clean Development Mechanism and Joint Implementation schemes of the Kyoto Protocol to the UN Framework Convention on Climate Change (UNFCCC).

Because the ESD covers economy-wide emissions, there are many areas where the healthcare sector can be affected. The ESD also ascribes a role to local and regional organisations and authorities as market actors. Depending on the Member State's target and use of flexibilities, the health care sector can contribute to implementation of national measures and policies through actions to improve heating systems and the energy performance of buildings, integrate renewable energy and save energy in transport. The EU legislation described in the following sections helps guide such action by the healthcare sector.

## ENERGY-RELATED PROCUREMENT, WITH AN EMPHASIS ON THE PUBLIC SECTOR

The healthcare sector can use procurement as a valuable tool to reduce its carbon footprint. As part of the largest purchaser group in the economy,[24] the public healthcare sector has the capacity to make significant contributions towards emission reductions and serve as a 'launching customer' for clean and energy efficient products, services, works and buildings.

### GENERAL EU RULES FOR SUSTAINABLE PUBLIC PROCUREMENT

Procurement by public authorities, including the healthcare sector, is currently governed at EU level by Directive 2004/17/EC and Directive 2004/18/EC (the Public Procurement Directives).[25] Together, the Public Procurement Directives establish a common framework of rules for procedures that 'contracting authorities' must follow when making procurement decisions, for instance around transparency and non-discrimination. The Public Procure-

ment Directives are outside the 2020 Climate and Energy Package. However, they contribute to aims of the Package because of their relevance for energy-related procurement decisions.

In 2014, the Public Procurement Directives were revised by Directive 2014/24/EU,[26] Directive 2014/25/EU,[27] and Directive 2014/23/EU.[28] Member States have until April 2016 to transpose the revised Public Procurement Directives into national law.

In general, EU rules support the use of public procurement as a tool to pursue sustainability objectives. Relevant laws have evolved to increasingly allow contracting authorities to include environmental performance issues within minimum requirements for procurement (known as technical specifications) as long as that discretion does not undermine the internal market (e.g., discrimination based on nationality) and other relevant rules.[29]

The 2014 revisions to the Public Procurement Directives clarify a number of legal issues that contracting authorities have faced in the past, making it easier to procure products and services sustainably.[30] Contracting authorities now have more scope to incorporate costs of environmental externalities (e.g., life cycle costing and product process impacts) in deciding a 'most economically advantageous tender'.[31] Tenders may also be scored against environmental and social criteria as long as they are linked to the subject matter of the contract and also include price or cost criteria.[32] Furthermore, certification and labelling schemes now play a more prominent role in helping to prove that desired environmental or social characteristics of technical specifications and tender award criteria are fulfilled.[33] Lastly, it is now the Member States' responsibility to ensure that economic operators comply with environmental, social and labour laws (e.g., relevant climate or energy laws) while performing public contracts. Since it is up to Member States to decide how this legislation will be transposed and implemented, the impacts on the healthcare sector will vary.

To assist contracting authorities in making sustainable procurement decisions, the European Commission, together with the participation of Member States and other stakeholders, develops non-binding Green Public Procurement (GPP) criteria for different product groups. GPP criteria help contracting authorities understand the impacts of certain products and establish clear, verifiable, justifiable and ambitious environmental criteria for products and services based on solid evidence. GPP criteria also help avoid internal market distortions and create a level playing field for companies across the EU.

The Public Procurement Directives are complemented by sector-specific legislation (e.g., on energy efficiency), which provide rules for contracting authorities' purchases. Each will be described below for their relevance for the healthcare sector.

### *Energy services and buildings*

Public authorities consume an estimated 6-7% of total electricity in Europe.[34] Therefore, the choice that public entities make when procuring services or buildings is important in reducing their carbon footprint. To this end, procurement of renewable energy can help lower GHG emissions from energy consumption, while moderation of consumption also reduces overall demand.

### *Energy efficiency improvements*

EU legislation requires and incentivises public entities to improve energy efficiency in the procurement of services. The main instrument governing public procurement of energy services and buildings is Directive 2012/27/EU (the Energy Efficiency Directive).[35]

The Energy Efficiency Directive calls on public bodies to lead by example.[36] Under Article 6, Member States must *"ensure that central governments purchase only products, services and buildings with 'high energy-efficiency performance'"* consistent with cost-effectiveness, economical feasibility, wider sustainability, technical suitability and competition. The obligation applies to all contracts covered by Article 7 Directive 2004/18/EC, and after April 2016, Directive 2014/24/EU. High energy-efficiency performance service contracts are defined in Annex III of the Directive as those that require service providers to use only equipment and products that have a high energy-efficiency performance.[37]

Article 6 also requires Member States to 'encourage' non-central public bodies to apply these requirements when tendering service contracts with significant energy content in order to assess the possibility of concluding long-term energy performance contracts that provide long-term energy savings.[38] Under Article 5, Member States must encourage public bodies to use energy service companies and energy performance contracts to finance renovations and implement plans to maintain or improve long-term energy efficiency.

Energy efficiency requirements for purchasing products, services and buildings by central government are governed by Annex III of the Energy Efficiency Directive. With regard to procurement of buildings, Annex III requires *authorities to "purchase, or make new rental agreements for, only buildings that comply at least with minimum energy performance requirements."*[39] Annex III does not apply to buildings if the *"purpose of the purchase is:*

- *(i) to undertake deep renovation or demolition;*
- *(ii) in the case of public bodies, to resell the building without using it for [its] own purposes; or*
- *(iii) to preserve it as a building officially protected as part of a designated environment, or because of its special architectural or historical merit."*[40]

The Energy Efficiency Directive gives Member States flexibility on how to require or encourage public bodies to set public procurement standards. As hospitals and clinics are not part of central government, Member States have even more leeway on how to encourage these actors to pursue energy-efficient public procurement. Furthermore, other relevant factors in procurement such as cost-effectiveness, economic feasibility, wider sustainability, technical suitability and sufficient competition are not defined by the Energy Efficiency Directive. Therefore, it is incumbent on the public healthcare sector at national level to ensure that it is encouraged and incentivised to contribute to energy efficiency using its purchasing power.

### *Procurement of renewable electricity, heating & cooling*

As significant consumers of power, heating and cooling, hospitals and clinics could play a large role in reducing GHG emissions by procuring energy from renewable sources. Several pieces of EU legislation (both within and outside the 2020 Climate and Energy Package) contribute to the procurement of renewable sources to meet power, heating and cooling needs – by both public and private actors.

The main legal instrument to support public procurement of green energy is Directive 2009/28/EC, the Renewable Energy Directive.[41] The Directive is aimed at ensuring that by 2020, 20% of the EU's energy consumption is met by renewable energy.

The Renewable Energy Directive supports consumption of renewable energy by the healthcare sector by establishing a system of 'guarantees of origin' to prove to final customers that a given share or quantity of energy was produced from renewable sources.[42] Guarantees of origin are particularly important for supporting procurement of renewable energy by the public healthcare sector, because they help reliably prove that energy has been purchased from a supplier according to specific environmental criteria.[43]

Outside the 2020 Climate and Energy Package, Directive 2009/72/EC (the Internal Energy Market Directive on Electricity),[44] which establishes common rules for the internal market in electricity, gives consumers a right to choose their own electricity supplier.[45] Therefore,

where the option is available, hospitals and clinics have a right to switch to a supplier that provides more green energy.

The Commission has also developed voluntary 'Green Public Procurement Criteria for Combined Heat and Power' and *'Green Public Procurement Criteria for Procurement for Electricity'*.[46] These criteria can help the public healthcare sector procure renewable energy according to clear, verifiable, justifiable and ambitious environmental criteria based on solid evidence in accordance with EU public procurement rules (e.g., technical specifications and selection and award criteria under Directive 2014/23/EU, which should apply to concession contracts for energy).

It is important to note that public procurement of renewable energy is not supported to the same extent as other energy-related services and products. For instance, the Renewable Energy Directive does not reference public procurement at all. Under the Energy Efficiency Directive, Member States must assess the potential for high efficiency cogeneration and efficient district heating and cooling,[47] and adopt policies that account for the potential to develop local and regional heat markets to support efficient heating and cooling. However, these are broad provisions and do not require consideration for public procurement as a tool to promote an expanding market for efficient or low-carbon energy sources.

### *Equipment*

To assist contracting authorities in procuring high energy-efficiency performance products, standards are established under the Energy Labelling Directive (2010/30/EU)[48] and the Ecodesign Directive (2009/125/EU).[49]

The Energy Labelling Directive establishes a harmonised framework of measures to provide end-use consumers with information on energy-related products so they can make better decisions. Specifically, it introduces a series of 'energy classes' for different 'product categories' covered by the Directive, leaving detailed rules on particular products to be established through secondary measures known as 'delegated acts'.[50] There are no product categories specific to energy-related health care equipment. However, other product categories that contain equipment that the healthcare sector may use are covered, including, but not limited to, space, combination and water heaters, PCs and servers and room air conditioning appliances.

The Ecodesign Directive aims to harmonise ecodesign requirements for energy-related products. The Directive also aims to ensure that at the design stage manufacturers take the product's energy consumption and other negative environmental impacts into account. For different product categories, minimum standards are established where it is possible to increase energy efficiency and lower energy use. Acting as a framework, more detailed requirements for individual products are established through 'implementing measures'.[51] Under the Ecodesign Directive, there are no product categories that explicitly cover medical equipment. However, electrodiagnostic apparatus, surgical, patient recovery and healing equipment and high energy diagnostic and healing equipment were included in the original 2007 Ecodesign Work Plan.[52] Furthermore, the Directive applies to other relevant product categories such as space, combination and water heaters, PCs, general office and street lighting (excluding specialist lamps in equipment), room air conditioning appliances, ventilation fans and building circulators. There is also a voluntary agreement for ecodesign of medical imaging equipment (magnetic resonance imaging, computer tomography, X-rays, nuclear medicine and ultrasounds) currently under development.[53]

There is a direct link between the standards for public procurement under the Energy Labelling and Ecodesign Directives, and Article 6 of the Energy Efficiency Directive, which requires Member States to encourage public bodies to purchase 'high energy-efficiency' products and equipment. Under Annex III of the Energy Efficiency Directive, products and equipment are considered to have high energy-efficiency performance if:

- the product is covered by the Energy Labelling Directive and complies with a the criterion belonging to the highest energy efficiency class possible in the light of the need to ensure sufficient competition; or
- the product is covered by an implementing measure under the Ecodesign Directive and complies with energy efficiency benchmarks specified by the implementing measure.

Office equipment is considered to have high energy-efficiency performance under Annex III if it is eligible to receive the Energy Star Logo.[54]

The Commission has also developed non-binding *'Green Public Procurement (GPP) Criteria for Electrical and Electronic Equipment used in the Health Care Sector'*,[55] a practical tool that facilitates sustainable equipment procurement decisions according to clear, verifiable, justifiable and ambitious environmental criteria based on solid evidence. The main aim of the GPP criteria is:

*"to encourage the purchase of healthcare [electrical and electronic equipment] EEE with reduced environmental impacts while always giving priority to safety and welfare of patients as well as that of medical staff, technicians and maintenance personnel."*

These GPP criteria cover both high and low voltage medical devices covered during the complete care cycle including prevention, diagnosis, treatment, monitoring, alleviation and rehabilitation, as defined under the Medical Devices Directive (Directive 93/42/EEC).[56] The GPP document also contains a list of product categories that are within its scope.

### *Transport-related procurement by the healthcare sector*

The 2020 Climate and Energy Package, in conjunction with the Public Procurement Directives and other sector specific legislation, supports green transport-related procurement by the healthcare sector.

Under Article 6 of the Energy Efficiency Directive, Member States are required to encourage public bodies to procure transport-related products with high energy-efficiency performance. In particular, there is a high energy-efficiency performance requirement for tyres. Under Annex III, tyres with high energy-efficiency performance are defined as *"only tyres that comply with the criterion of having the highest fuel energy efficiency class."*[57]

It is important to note that as of April 2015, concession contracts for ambulances will be partially covered by Directive 2014/23/EU (on the award of concession contracts). The Directive will only apply to ambulance services provided by commercial organisations, not non-profit organisations or associations. For patient transport services, both commercial and non-profit organisations and associations will be covered. Nevertheless, sustainable public procurement guidelines (mentioned in the section on 'General EU rules for sustainable public procurement'), will also apply.

Procurement of vehicles is also aided by the Clean Vehicles Directive (Directive 2009/33/EC),[58] which aims to use public procurement to promote a market for environmentally friendly vehicles. This Directive applies to all purchases of road transport vehicles covered by the Public Procurement Directives. It requires contracting authorities to take energy and environmental impacts linked to the operation of vehicles over their whole lifetime into account in purchasing decisions.

Lastly, the Renewable Energy Directive and the Fuel Quality Directive (Directive 2009/30/EC)[59] attempt to enhance the market for alternative and renewable sources of fuel in the transport sector. Aiming to ensure that 10% of all transport is supplied by renewable sources by 2020 as a share of final energy consumption, the Renewable Energy Directive establishes sustainability criteria for biofuels and bioliquids.[60] For its part, the Fuel Quality Directive establishes a low carbon fuel standard that requires fuel suppliers to reduce the GHG intensity of energy supplied for road transport.[61] The Renewable Energy Directive also requires Member States to ensure that the public

has access to information on the availability, and environmental benefits of, renewable energy for transport.[62] Such information should play a supportive role in helping both private and public actors from the healthcare sector to better understand issues around transport and renewable energy.

## IMPROVING ENERGY EFFICIENCY AND ENERGY PERFORMANCE IN BUILDINGS

The EU has set a target to achieve a 20% cut in primary energy use by 2020 compared with projected levels, by improving energy efficiency. The target is set at EU level and is indicative, which means it is non-binding.

The 2020 Climate and Energy Package called for an ambitious strategy for achieving the target through a number of legislative measures directed at different levels and actors. This legislation promotes enhancement of energy efficiency and energy performance in buildings owned or occupied by the healthcare sector, including through:

- Provisions requiring establishment of energy standards and certification for existing buildings;
- Provisions that promote informing consumers on their energy consumption;
- Provisions that require energy performance improvement during renovations and construction of new buildings; and
- Financial incentives to support implementation.

The main legal instruments to drive progress in these areas are the Energy Efficiency Directive and the Energy Performance of Buildings Directive, or EPBD (Directive 2010/31/EU), while additional support can be found in the Renewable Energy Directive.

### STANDARDS AND ENERGY CERTIFICATION FOR EXISTING BUILDINGS

The EPBD aims to provide a common framework to improve energy performance in buildings. Under the EPBD, Member States are required to take necessary measures to establish minimum 'cost-optimal' energy performance requirements for buildings. These standards must be adopted with energy performance calculated according to specific methodologies laid out in the EPBD.[64]

Under Annex I of the EPBD, which sets a common framework for calculating the energy performance of buildings, Member States must create an explicit category to calculate the energy performance of hospitals. Under Article 11, Member States must establish a system to certify the energy performance of buildings so that owners and tenants can compare and assess their energy performance. This certification requirement applies to:

1. Buildings or building units which are constructed, sold or rented out to a new tenant; and
2. Buildings where a total useful floor area over 500 $m^2$ is occupied by a public authority and frequently visited by the public. On 9 July 2015, this threshold [...] shall be lowered to 250 $m^2$.[65]

The certificate must be provided to the tenant or buyer whenever the building is sold or rented out, and included in advertisements while for sale or rent. Member States must ensure that the certificate *"is displayed in a prominent place clearly visible to the public."*[66]

In addition to providing a clear picture of performance, the certificate must include technically feasible recommendations for cost-optimal or cost-effective improvement in performance. The certificate must also provide the owner or tenant with an indication of where they can receive more detailed information, including how to implement the recommendations. Other information such as energy audits, incentives or financing possibilities may also be provided. The EPBD also required the Commission to assist Member States by establishing a voluntary common EU-wide certification scheme by 2011.

### REQUIREMENTS TO INFORM CONSUMERS OF THEIR ENERGY USE

The Energy Efficiency Directive requires Member States to promote consumer awareness of current energy use with an aim to realise energy savings. Both public and private actors in the healthcare sector should be able to use these provisions to gain a better understanding of their consumption patterns and make appropriate adjustments. Many of the provisions described below give wide discretion to Member States. Therefore, the extent to which they impact the healthcare sector will vary depending on national circumstances.

#### *Metering*

Metering systems are very useful in helping consumers to better understand their use patterns and reduce their energy consumption. Under Article 9 of the Energy Efficiency Directive, Member States must – to the extent technically feasible, financially reasonable and proportionate – ensure that final consumers have individual meters to reflect their consumption levels of electricity, natural gas, district heating and cooling and domestic hot water. Article 9 explains situations where meters must be provided, and provides minimum standards for intelligent or smart metering when they are rolled out. Under Article 10, where customers do not have smart meters, billing information must be accurate and based on actual consumption and customers must have access to – among other things – information on historical consumption. Under the EPBD, whenever a new building is constructed or an existing one undergoes major renovation, Member States must encourage the introduction of intelligent metering systems.[67] The Directive on the Internal Market in Electricity (Directive 2009/72/EC) also requires Member States to strongly recommend that, where appropriate, electricity undertakings implement intelligent metering systems.[68]

#### *Energy audits*

Energy audits are 'systematic procedures' used to identify, quantify and report existing energy consumption profiles and energy savings opportunities in building, industrial or commercial operations or installations, and in private or public services. Under Article 8 of the Energy Efficiency Directive, Member States are required to ensure that large enterprises undergo regular energy audits at least every four years. They must be carried out in an independent and cost effective manner by qualified and/or credited experts. For small and medium-sized enterprises,[69] Member States are required to develop programmes to promote and encourage regular energy audits. Such incentives may include support schemes or use of Structural Funds (see below) to cover audit costs and implementation of cost-effective recommendations that result from the audit, as long as they comply with State aid rules and do not discriminate. Member States are also required to encourage public bodies to conduct energy audits.[70]

#### *Energy labelling schemes, training and education*

Under Article 7 of the Energy Efficiency Directive, Member States are required to oblige energy retailers (suppliers) to achieve energy savings of 1.5% per year from end-use customers. As a second option, however, Member States may adopt alternative measures such as taxation and financing schemes or fiscal incentives, voluntary agreements to apply energy-efficient technologies, energy labelling schemes (outside those that are mandatory under EU law) and training and education, among other measures.

#### *Consumer information and empowerment*

The Energy Efficiency Directive requires Member States to take appropriate measures to promote and facilitate efficient energy use by 'small energy customers'. This may include fiscal incentives, access to finance, grants or subsidies; information; workplace activities; and engaging customers to communicate cost-effective and easy-to-achieve changes in energy use, as well as information on different measures. To assure that consumers receive competent technical, objective and reliable energy services, Member States are required to establish qualification, accreditation and certification schemes for energy service providers.[71] Under Article 20 of the EPBD, authorities must ensure customers have access to information

on enhancing the energy performance of their building. In particular, they must be able to understand the role and value of energy performance certificates for their buildings, as well as inspection reports. Authorities must also ensure guidance and training is available.

### *Regular inspections for heating and air conditioning*

Under the EPBD, Member States are required to lay down necessary measures to establish regular inspections for heating and air conditioning systems with a rated output of more than 20 kW and 12 kW, respectively.[72] There are certain thresholds set for particular systems depending on type and size. Alternatively, governments must ensure that adequate advice on modification or replacement of heating and cooling systems is available to customers.

### REQUIREMENTS RELATING TO MAJOR RENOVATIONS AND NEW BUILDINGS

The Energy Efficiency Directive and the EPBD both support public and private actors from the healthcare sector in improving energy efficiency through building renovation and construction of new buildings.

### *Renovation requirements – both public and private*

Under Article 5 of the Energy Efficiency Directive, 3% of central government buildings must be renovated to meet minimum energy performance requirements annually from 2014 onwards. These requirements are referenced to standards established under Article 4 of the EPBD. However, regional and local public bodies must also be encouraged to develop energy efficiency plans that include renovations that are consistent with minimum energy efficiency standards.

More broadly, under Article 4 of the Energy Efficiency Directive, Member States were supposed to define long-term strategies to stimulate renovations in the buildings sector by 30 April 2014. They should be coordinated with requirements to renovate public buildings under Article 5 (mentioned above) and be updated every three years. These plans are part of Member States National Energy Efficiency Action Plans, which are publicly available. Members of the healthcare sector can consult these plans to find out more about their Member States' respective strategies to promote buildings renovations.

### *Energy performance enhancements as part of major renovations and new buildings*

For new buildings, under Article 6 of the EPBD all new buildings must meet specific energy performance requirements. Furthermore, Member States are required to ensure that formal consideration/analysis is given to integrating one of the following for heating: decentralised renewable energy, cogeneration, district heating or cooling, or heat pumps. This analysis can be conducted for individual buildings or for groups of similar buildings in the same area, particularly where there are collective heating and cooling systems. There is also a general requirement that by 31 December 2020, all new buildings in Member States must be 'nearly zero-energy buildings'.[73] Public authorities, as leaders by example, are expected to meet this requirement by 31 December 2018.

Under Article 7 of the EPBD, Member States must ensure that whenever a public building, or a significant part of it, undergoes major renovation, its energy performance is upgraded to meet minimum requirements established under Article 4 of the Directive. In addition, Member States are required to develop national plans for transforming buildings that are refurbished into nearly zero-energy buildings, which among other things must include measures within local building regulations and codes for integrating renewable energy sources. In this way there is a clear connection between contributions under the Renewable Energy Directive towards meeting nearly-zero energy requirements under the EPBD. In furthering this obligation, the EPBD promotes providing roofs of public or mixed private-public buildings for use by third parties to install renewable energy installations (e.g., solar PV). District heating and cooling may also be used to meet this obligation.



## PRODUCTION AND USE OF RENEWABLE ELECTRICITY, HEAT AND COOLING

Increasingly, EU legislation provides opportunities for individual consumers from the healthcare sector to install renewable energy technologies to meet their own consumption needs and to contribute to a more efficient and clean energy market supply.

### MEASURES TO PROMOTE RENEWABLE ENERGY PRODUCTION

Planning and other administrative barriers often represent significant costs in realising individual projects. Therefore, provisions that address information and administrative burdens can reduce cost barriers, encouraging uptake by the healthcare sector.

The Renewable Energy Directive provides measures that can support the healthcare sector in installing renewable energy systems. Member States must ensure *"that information on support measures is made available to all relevant actors"* including consumers, of which any number of actors within the health care sector are included.[74] Local and regional authorities must also contribute towards developing suitable information, awareness raising, guidance and training programmes to inform citizens of benefits and practicalities of developing and using renewable energy.

The Renewable Energy Directive also aims to improve planning and other administrative barriers, such as grid connections, to installation of renewable heating, cooling and electricity systems. First, Member States must recommend that all local and regional administrative bodies include renewable heating and cooling in planning of city infrastructure, where appropriate.[75] Where new hospitals or clinics are planned this requirement can contribute to the green design of such projects. Relevant authorities should also *"consider the possibility of replacing authorisations by simple notifications … when installing small decentralised devices for producing energy from renewable sources."*[76] Simplification of administrative burdens for installing renewable energy systems is also supported by the Energy Efficiency Directive, which requires simplification of authorisation procedures for small and micro-cogeneration units.[77]

### PARTICIPATING IN THE ENERGY MARKET THROUGH DEMAND SIDE RESPONSE

Demand side response refers to adjustments by consumers or producers or from their normal patterns in response to changes in time-variable electricity prices or incentive payments.[78] Depending on the extent to which demand side response is recognised as a resource by energy markets, it allows consumers to participate in providing flexibility services to the system. Because of their operating hours and load sharing potential, hospitals can participate in demand response by reducing energy consumption from noncritical areas such as cafeteria and lounge lighting and shifting loads to backup generators or storage. [79]

The Energy Efficiency Directive contains provisions to promote demand response. However, these provisions are fairly general and non-prescriptive. Article 15(8) of the Energy Efficiency Directive requires national energy regulators to *"encourage"* demand side resources to participate in wholesale and retail markets. Furthermore, Member States must ensure that system operators treat demand response providers in a non-discriminatory manner. Member States are also required to ensure removal of perverse incentives for consumers that might hamper participation in demand response or balancing markets. More generally, Member States must promote participation of demand response in balancing, reserve and other system services markets, including by ensuring system operators define technical modalities for participation in these markets.

There is a strong connection between consumers having access to relevant, clear and understandable consumption information and becoming an active participant in the energy system. As such, there is a supportive relationship between national implementation of measures that relate to accessing information on consumption patterns, in particular through smart meters.

Overall, demand response is not very well supported by the 2020 Climate and Energy Package, and in many Member States the market for demand side resources remains undeveloped.[80] Therefore, unless a Member State is particularly progressive in this area, there are currently few incentives for the healthcare sector to become active in this area. Nevertheless, as explained in the next chapter, this may change under the 2030 framework.

## FINANCIAL INCENTIVES UNDER THE 2020 PACKAGE TO REDUCE THE CARBON FOOTPRINT FROM ENERGY

Finance is essential to helping the healthcare sector unlock potential to invest in energy savings and renewable energy. Depending on national circumstances, there are a number of potential opportunities for the sector to benefit from various schemes that are provided for under the EU's 2020 Climate and Energy Package.

### FINANCING SCHEMES UNDER THE ENERGY EFFICIENCY DIRECTIVE

Under Article 20 of the Energy Efficiency Directive, Member States are required to *"facilitate establishment of financing facilities, or use of existing ones, for energy efficiency improvement measures."* Financing facilities can make use of innovative mechanisms such as loan guarantees for private capital, loan guarantees to foster energy performance contracting, grants, subsidised loans, dedicated credit lines and third party financing systems. When provided at national level, such mechanisms can be particularly helpful for healthcare sector actors seeking to invest in energy efficiency improvements.

Member States are also encouraged to establish National Energy Efficiency Funds to support national level initiatives. Revenues from annual emissions allocations under the ETS may be used to finance these funds, and regulated entities under an Energy Efficiency Obligation Scheme are allowed to fulfil their obligations by making contributions.[82] Member States and regions are also encouraged to use Structural Funds, Cohesion Funds and Rural Development Funds to trigger investments.[83]

The Commission must assist with the establishment of financing facilities for energy efficiency and exchange best practice in the area. Because many financing schemes are subject to national level circumstances, exchange of national best practices can provide valuable learning opportunities in how to finance energy efficiency improvements, including in the healthcare sector.

### FINANCING MEASURES TO INCENTIVISE NEARLY-ZERO ENERGY BUILDINGS

Under Article 4 of the EPBD, Member States have a general obligation to provide financial incentives to promote zero-energy buildings and general improvements in energy performance. The Commission must help Member States establish financial support programmes to increase energy efficiency in buildings. Where incentives are provided at national level, it may be possible for hospitals, clinics and public authorities to receive assistance to invest in energy efficiency improvements or renewable energy systems to promote zero-energy building standards.

### INVESTMENT AND OPERATIONAL SUPPORT FOR RENEWABLE ENERGY

Even as the costs of renewable energy technologies fall, providing incentives for individual uptake is important for ensuring the creation of a strong market for renewable energy. The Renewable Energy Directive recognises the opportunities for economic growth and investment in local production of renewable energy. As such, the Directive promotes the use of Structural Funds and support schemes for renewable energy, including investment aid, tax exemptions or reductions, refunds and a guaranteed price for exported electricity to the grid. While such schemes vary across Member States, they are generally available in one form or another. To support investment efforts, the Commission is directed to assess how to better use Structural Funds and framework programmes, and make better use of funds from the European Investment Bank and other public finance institutions.



### THE COVENANT OF MAYORS INITIATIVE

The Covenant of Mayors (CoM) Initiative was developed to help local authorities implement sustainable energy policies under the 2020 Climate and Energy Package. Once becoming a Covenant signatory, local authorities prepare a Baseline Emission Inventory and develop a Sustainable Energy Action Plan, which outlines key actions they plan to undertake. The CoM provides a platform for local authorities supported by EU Institutions. It also allows local authorities to access financing opportunities, for instance from Structural and Cohesion Funds, the European Investment Bank funds, funds managed by the Commission, and other technical assistance. Indeed, under the CoM the healthcare sector has received support, for instance, to retrofit existing buildings.[84]

### CARBON TAXES

Putting a price on $CO_2$ helps incentivise energy efficiency improvements and/or a shift to consumption of low carbon energy sources. Under the ETS Directive, $CO_2$ taxes are one of the ways to take equivalent measures as an alternative to hospitals' participation under the ETS. Furthermore, as an alternative to establishing an Energy Efficiency Obligation Scheme under Article 7 of the Energy Efficiency Directive, Member States may establish energy or $CO_2$ taxes to encourage the reduction of end-use energy consumption. Depending on national circumstances, the revenues from $CO_2$ taxes can fund financial incentive schemes under the Energy Efficiency Directive, as explained above.

## CONCLUSIONS FROM THE 2020 CLIMATE AND ENERGY PACKAGE

Several conclusions can be drawn about how the current EU legal framework influences healthcare sector efforts to adopt energy efficient and cleaner energy strategies.

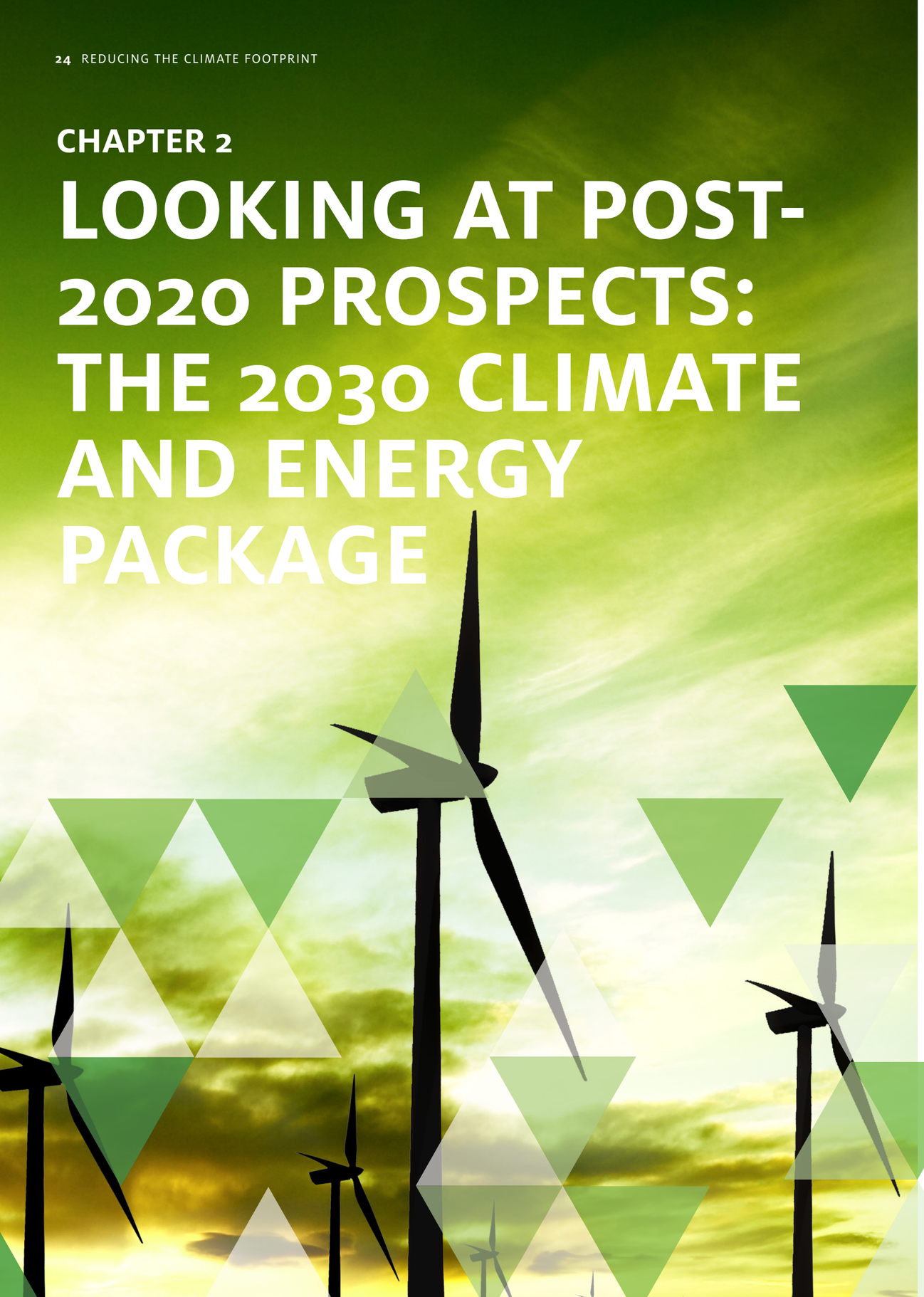
It is clear that the healthcare sector is encouraged to participate in the achievement of the 2020 targets. However, Member States often have discretion in how they transpose and implement EU legislation. Therefore, the extent to which the healthcare sector is impacted by the 2020 Package depends significantly on national circumstances. There is a need to improve Member States' transposition and implementation of relevant legislation, with the EU Commission taking a more proactive role in using its oversight and enforcement authority. In order to facilitate this there is also a need for higher quality reporting by Member States about what supportive policies and measures they include in their relevant national plans and strategies for energy efficiency and renewable energy.

There is also room for improving existing legislation. First, while the ESD sets a framework for addressing economy-wide emissions, increasing the ambition level of Member States and reducing the scope to use flexibilities could enhance focus on national level efforts, and hence the role of the healthcare sector. Second, the Energy Efficiency Directive and the EPBD could provide stronger requirements for Member States to encourage the development and implementation of local measures and policies that support substantial renovations of buildings and renewable heating and cooling. Third, there is a need to improve the legal and policy framework to support transport, and consumers themselves, so that they have stronger incentives to better control demand and provide flexibility services to energy markets.

Lastly, there is a need to better support local investments in energy efficiency in buildings and renewable energy production, both in the private and public sector. This includes improving awareness and guidance for local stakeholders and public authorities to facilitate access to opportunities and incentives for undertaking measures, as well as exchange of best practice between Member States. The next chapter looks at the potential future landscape of climate and energy legislation after 2020 and whether it is likely to address any of these needed improvements.

CHAPTER 2

# LOOKING AT POST-2020 PROSPECTS: THE 2030 CLIMATE AND ENERGY PACKAGE





The existing Climate and Energy Package aimed to achieve specific 2020 objectives. Aside from the Emissions Trading System, which theoretically continues indefinitely, the rest of the package must be updated so that supportive climate and energy policies and legislation continue beyond 2020.

There is still uncertainty over what the post-2020 legislative framework will look like. This uncertainty is due to several reasons. First, many Member States are in worse economic and fiscal positions than in 2008, and many Member States now want more flexibility in order to minimise costs and ensure competitiveness. Also, the international community's failure to negotiate a follow up to the 2009 Kyoto Protocol has emboldened Member States that do not support strong climate ambition. Second, the Lisbon Treaty, which reformed the Treaty on the Functioning of the EU (TFEU) and established an explicit EU competence to act on energy, entered into force after the 2020 Climate and Energy Package was passed. This has made it harder to adopt EU legislation that potentially has an impact on Member States' energy mix. Third, it is unclear whether the new President of the EU Commission, Jean-Claude Juncker and his First Vice-President in charge of Better Regulation, Frans Timmermans, is more concerned with light-touch regulation than strong climate action in the energy sector. In particular, there is a worry that some legislation could be weakened or done away with post-2020.

Nevertheless, there may be new opportunities under the 2030 climate and energy framework for the healthcare sector to reduce its carbon footprint from energy use. In particular, local authorities and cities are more strongly expressing their own climate ambition, even if it does not comport with the national level position. As the ones responsible for local level implementation, local and regional authorities are demanding to be involved in policy development and to receive more governmental and institutional support to be proactive on energy. If local level action is further empowered, the healthcare sector could potentially play a stronger role in meeting 2030 climate and energy ambition.

The Commission is currently developing proposals based on the European Council Conclusions of October 2014.[85] With this in mind, the following section looks at the possible impact of the forthcoming 2030 climate and energy legislative package on the healthcare sector's role in reducing energy-related GHG emissions.

## BUILDING BLOCKS FOR A NEW LEGISLATIVE FRAMEWORK FOR CLIMATE AND ENERGY

In advance of the 2015 UNFCCC Conference of the Parties in Paris, where the international community will attempt to conclude a global climate agreement, the EU has been negotiating internally what it will commit to in terms of overall reduction of GHG emissions. In October 2014, the European Council agreed on a high level of ambition, including a number of targets. This will provide the basis for development of the 2030 legislative framework that will govern future implementation of climate and energy policy.

### UPDATED 2030 TARGETS WITH MORE FLEXIBILITY FOR MEMBER STATES

The European Council agreed to a set of revised targets to reflect higher ambition for 2030. First, the European Council agreed that the EU should have a binding target to reduce GHG emissions by 'at least' 40% 'domestically' by 2030 compared to 1990. This implies that the

40% target does not include emissions reductions generated through international offset schemes. Potentially, there is room to raise the target above 40% if the international climate negotiations result in a strong outcome, which would also open the door for use of international offsetting mechanisms.

Second, the European Council agreed to establish a target to increase the share of renewable energy consumed in the EU to 'at least' 27% by 2030. However, the target will only be binding at EU level. The agreement excludes nationally binding targets, although individual Member States may set higher targets if they wish. In order to ensure that the EU meets this target, the European Council agreed that a 'governance system' (explained separately below) should be established. This represents a significant retreat from the 2020 Climate and Energy Package, which established nationally binding targets to ensure that the EU target was met. This modification will likely have significant implications for the development of renewable energy policy and legislation in the coming years, giving Member States much more scope to revise or do away with support for renewable energy, reducing investor certainty. The Renewable Energy Directive will also need to be revised, although some Member States would rather see it fall away completely.

Third, the European Council agreed to establish an 'indicative' EU-level target to improve energy efficiency by at least 27% by 2030. Depending on the outcome of the international climate change negotiations, the target may be revisited by 2020 to possibly raise the target to 30%. The target's indicative nature means that it is not binding at national or EU level, although this does not significantly depart from the 2020 framework, where the target is already indicative. What is additional is the possibility for the Commission to *"propose priority sectors where significant energy-efficiency gains can be reaped, and ways to address them at EU level, with the EU and the Member States focusing their regulatory and financial efforts on these sectors."* This could potentially mean more targeted action in the buildings or appliances sectors to incentivise action, including by the healthcare sector. The results will depend on the outcomes of revisions of relevant legislation including the Energy Efficiency Directive, the Energy Performance of Buildings Directive (EPBD), and the Ecolabelling and Ecodesign Directives.

### A NEW 'GOVERNANCE FRAMEWORK' FOR EU CLIMATE AND ENERGY POLICY

Instead of nationally binding targets to increase the share of renewable energy, the European Council was only able to agree on a target that is binding at EU level. Member State demands for increased flexibility on energy were recognised by the Commission in its January 2014 Communication on a climate and energy policy framework for 2030.[86] As a replacement for nationally binding targets, the Commission suggested the creation of a governance framework based on national plans for competitive, secure and sustainable energy prepared by Member States.

This replacement of renewable targets has expanded into attempts to develop a more coherent framework to better integrate GHG emissions, energy efficiency and renewable energy legislation with other EU energy objectives. To start, the Commission will attempt to simplify and streamline planning and reporting across different areas. The European Council agreed that there should be a *"reliable and transparent governance system without any unnecessary administrative burden"* that:

- builds on existing national climate programmes, national plans for renewable energy and energy efficiency and brings them together and streamlines them;
- provides transparency and predictability to investors through systematic monitoring of key indicators;
- steps up the role and rights of consumers (explained below); and
- facilitates better coordination of national policies and fosters Member State cooperation.

The prospect of a new governance system for climate and energy proposes significant uncertainty for the future of policy in the area, and there is room for some worry. The lack of detail and the emphasis on flexibility by the Commission and the European Council suggests a potentially significant departure from rule of law. For instance, the Commission has said that the governance system will not be set in legislation. This could reduce accountability and transparency over how Member States implement measures to meet 2030 the targets and relevant climate and energy legislation, should they exist past 2020.

A weak governance system could compromise the EU's ability to effectively stay on track to meet the 2030 targets. Without good governance, investor certainty in the renewable energy and energy efficiency sectors will suffer, and the EU could experience more difficulty in achieving other key energy objectives such as completion of the internal energy market, enhancing energy security, and maintaining a competitive position in low carbon energy sectors. National level incentives for the healthcare sector to further adopt renewable energy technologies or invest in energy efficiency improvements could also be affected. Much will depend on the Commission's future proposals for the governance system and whether it ensures delivery of the 2030 targets consistent with long-term decarbonisation needs, and the extent to which key climate and energy legislation is affected.

The 2030 governance system will also be impacted by the outcomes of the Commission's Energy Union Communication (explained below), which incorporates governance as a way of delivering long-term EU climate and energy objectives. The Commission originally aimed to release a Communication or 'policy initiative' on governance later in 2015 to set out more concrete proposals for the 2030 governance system. However, the Energy Union Communication does not mention such an initiative, and its future is therefore uncertain.

### EMISSIONS TRADING SYSTEM REFORM

Similar to the 2020 Climate and Energy Package, the European Council has divided its overall GHG emissions target between the traded sector, which will be governed by the ETS, and the non-traded sector, which will be governed under the Effort Sharing Decision (ESD). According to its Conclusions, the traded sector will have a reduction target of 43%, while that of the non-traded sector under the ESD will amount to 30%.

The European Council Conclusions envision two changes to the ETS. First, the annual reduction of the overall cap under the ETS will be tightened from 1.74% to 2.21% from 2021 onwards. This means that the annual overall allowance of GHG emissions should decrease at a faster rate. Second, a Market Stability Reserve will be created to maintain a more stable price for carbon, decrease volatility and provide more certainty. These changes are not likely to affect hospitals as long as their exemption under Article 27 of the ETS Directive remains in place. There has not been any indication that this provision will change post-2020.

A new reserve of 2% of ETS allowances will also be set aside to create a fund to provide additional investment in low income Member States (GDP per capita below 60% of the EU average). Proceeds will be used to improve energy efficiency and modernise the energy system. There should also be simplified arrangements for small-scale projects. Most of this finance will likely go towards the energy sector. However, hospitals that produce their own energy could potentially be beneficiaries.

### EFFORT SHARING DECISION REFORM

Distribution of efforts covered under the Effort Sharing Decision (ESD) will continue based on relative GDP per capita. Furthermore, as mentioned above, the 40% target is envisioned as domestic reductions meaning without international offsets.

However, under the European Council's Conclusions there may be scope to expand the use of flexibility under the ESD. If a Member State has a national GHG emissions reduction target that is both significantly above the EU average and their cost effective reduction potential, the Member State will get a one-off reduction

of its ETS allowances. This new flexibility will also apply to Member States that do not have free allocations for industrial installations as of 2013. There could also be scope to expand the generation of offsets through projects in other EU Member States. While the Conclusions did not mention it, Member States could potentially also try to bank unused AEAs at the end of 2020 to be used towards meeting compliance with their 2030 targets.

Even without the use of flexibility mechanisms or offsets, under the ESD there will be an over-achievement of 2020 ambition equal to around 600 million tons of $CO_2$-equivalent because national level ambition is low.[87] Eligibility to carry over weak ambition into the post-2020 period and use more flexibility could dilute Member States' GHG commitments for 2030 and affect incentives to implement new measures at national level. However, depending on the methodology for generating offsets through projects in Member States where such actions are cheaper, they could lead to new mitigation and investment opportunities in poorer states with added climate benefits across the EU.

In line with the conclusions on energy efficiency, there may be scope to create sector-specific targets under the ESD. Such targets could be established for buildings, appliances or transport, providing a stronger framework to facilitate further national measures in these areas. The European Council also invited the Commission to look at how to potentially include Land Use, Land Use Change and Forestry (LULUCF) within the ESD. However, inherent characteristics of GHG emissions and removals from LULUCF activities fundamentally differ from fossil fuel emissions because any LULUCF savings may be temporary only, estimates of emissions and removals are very uncertain, and annual accounting is not appropriate due to annual variability and the long lead-time needed for management changes to take effect.[88] Merging the two could potentially undermine national GHG reduction commitments. Legislative revisions for the ESD are set to take place in 2016.

## A RESILIENT ENERGY UNION WITH A FORWARD-LOOKING CLIMATE CHANGE POLICY

One of the significant outcomes of the European Council Conclusions of October 2014 was its affirmation of the goal to build an Energy Union aiming at affordable, secure and sustainable energy. The Energy Union originated from a proposal from then Prime Minister Donald Tusk of Poland as a response to energy security threats triggered by the political crisis in Ukraine. However, the concept has evolved and the Energy Union is becoming understood as a political space for creating a renewed long-term vision for the future of Europe's energy system – in particular the energy transition.

Moving from the European Council Conclusions, the Commission has just released a Communication on *'A Framework Strategy for a Resilient Energy Union with a Forward-looking Climate Change Policy'*.[89] The Energy Union will be underpinned by five reinforcing and interrelated 'dimensions', including:

- Energy security, solidarity and trust;
- A fully integrated European energy market;
- ***Energy efficiency contributing to moderation of energy demand;***
- ***Decarbonising the economy;***[90] and
- Research, innovation and competitiveness.

The Commission has also proposed a *'Roadmap'* that contains a list of initiatives – including EU legislation – that it will prioritise over the next five years in order to achieve an Energy Union.

### *Energy Efficiency contributing to moderation of demand*

Interestingly, the Energy Union places much stronger emphasis on the need to treat energy efficiency as a source in its own right, representing the value of energy saved, and provide it with primary consideration in Member State policies, particularly in the transport and the buildings sector. In its Roadmap, the Commission has signalled a future role for the Energy Efficiency Directive, the Directive on Energy Performance of Buildings and the Energy Labelling and Ecodesign Directives, which will be reviewed between 2015 and 2016. The Commission also aims to develop a 'Smart Financing for Smart Buildings' initiative to facilitate better access to existing financing instruments. In addition, the Commission's forthcoming EU Strategy for Heating and Cooling in 2015 will aim to boost efficiency in buildings. The above signify a potentially strengthened role for energy efficiency measures in meeting decarbonisation and energy security objectives.

### *Decarbonising the economy – renewable energy*

The Commission also envisions a role for legislation on renewable energy within the Energy Union. According to its Roadmap, between 2016 and 2017 the Commission will work on a 'New Renewable Energy Directive for 2030', as well as on best practice in self-consumption and support schemes. This will be supported by the development of a new market design between 2015 and 2016 to better integrate renewable energy. There is also scope to improve the role of renewable sources to meet heating and cooling needs.

### *Energy Union governance*

Importantly, there will be links between broader long-term Energy Union governance and delivery of the 2030 objectives. Under the Energy Union Communication, governance should bring together energy, climate and other relevant policy areas to enhance longer-term coherence. In addition to streamlining planning and reporting, it should also secure implementation of the internal energy market and delivery of the 2030 targets. There should also be a 'dynamic governance process' that involves energy dialogue with stakeholders to inform policy making, support management of the energy transition and improve data, analysis and intelligence to underpin the Energy Union. To steer the policy debate and address key issues, there will be an annual State of the Energy Union, with annual reporting to the European Parliament and the Council. The Energy Union Communication was silent on how – or in which form – governance should move forward, demonstrating the political sensitivity of the issue. Assurance of how the EU intends to ensure that the 2030 targets are met therefore remains uncertain.

### *Outlook for the Energy Union*

The Energy Union is an ambitious initiative by the Juncker Commission, but what it will look like and whether it will actually gain enough momentum to survive long term is still uncertain. The Communication sets out a vision, but it will need to be endorsed by the European Council to have significant influence moving forward.

The vision laid out by the Commission could potentially provide a strong high level framework capable of providing strategic long-term direction for the transition of Europe's energy system towards decarbonisation. An Energy Union that places energy efficiency and renewable energy at its centre – particularly with an emphasis on empowering and incentivising local action – could reinforce the role of the healthcare sector in moving towards low carbon energy. However, the Energy Union is merely a political forum for expressing high level ambition – whether that translates into concrete legislative proposals that embed strong ambition is an entirely different matter. Furthermore, other aspects of the Communication, including references to finding new routes and transport infrastructure for gas, could compete with energy efficiency and decarbonisation objectives. Due to the difficult political context between Member States and the EU on climate and energy policy, many initiatives may be watered down as they move forward.

## POTENTIAL FOR RENEWED EFFORTS ON TRANSPORT

Transport is covered by the ESD and sector-specific legislation. Overall, however, there is currently an insufficient policy and legal framework to effectively address GHG emissions from the sector. As such, the European Council agreed that the Commission should

further examine instruments and measures for a comprehensive and technology neutral approach to promote emissions reductions and energy efficiency in transport, for electric transportation, and for renewable energy sources in transport after 2020.

In its January 2014 Communication on 2030 climate and energy policy, the Commission stated that there should not be a new target for use of biofuels for transport, which instead needs a more holistic and integrated approach. In its Energy Union Communication, the Commission suggests it will propose *'a comprehensive road transport package'*, including a review of legislation with a view to tightening CO2 emission standards for passenger cars and vans post-2020, and measures to increase fuel efficiency, to enhance deployment of alternative fuels, and to create a more robust market for electric transport. On this latter point, the Energy Union Communication mentions that the Commission will further promote procurement of clean vehicles. Lastly, there could also be potential scope for covering the transport sector under the ETS.

Depending on further steps, additional efforts could help the healthcare sector's transport-related purchasing decisions support a market for cleaner, more energy-efficient, alternative sustainable fuels and electrified vehicles. The latter, if supported by further integration of local decentralised renewable energy, could help the healthcare sector support local flexibility services through energy storage facilities for electrified cars. The Commission aims to review relevant legislation between 2016 and 2017.

## AN ENHANCED ROLE FOR CONSUMERS – FOCUS ON DEMAND SIDE RESPONSE

In its October 2014 Conclusions, the European Council agreed that the 2030 governance system will *"step up the role and rights of consumers."* This provision recognises that households and businesses have an active role to play in the energy system through producing their own renewable energy, and playing an active role in markets for demand side response services.

The current legislative framework is currently insufficient for promoting consumer engagement in energy markets, for instance in forward, balancing or capacity markets.[91] However, the 2030 legal framework could provide further opportunities and market incentives for consumers, including from the healthcare sector, to become more active. The Energy Union Communication states that legislation must adapt the electricity market to enable full participation of consumers, notably through demand response, and that there should be a stronger role for regional and local authorities so consumers have better access to information, tools and financial incentives to save energy. This would be enabled through, as the Commission terms it, treating energy efficiency as an energy source in its own right. A forthcoming Communication on the Retail Energy Market in mid-2015 should contain more details on this initiative, and the Commission also aims to develop best practice on renewable self-consumption and support schemes.

## JUNCKER'S €315 BILLION INVESTMENT PACKAGE

The provision of investment incentives will likely be a key component in promoting investor certainty and confidence in the post-2020 context, particularly at local level and with small-scale financing and projects. In December 2014, the Commission announced a €315 billion investment stimulation package through the creation of a new European Fund for Strategic Investment (EFSI) to facilitate private investment in sectors that are high EU priorities but currently underfunded, such as electrical networks and energy efficiency. On 15 January, the Commission released a legislative proposal to establish the EFSI, and the Commission aims to have the EFSI fully operational by June 2015.

The Member States have since put forward potential investment projects under the fund. However, as of yet only 5% of proposed projects address energy efficiency, smart cities or demand side management.[92] Indeed, there is much greater potential to place a stronger emphasis on low carbon energy investments in the EFSI. The extent to which energy efficiency investments are prioritised depends on the EFSI's overall orientation, investment guidelines and strategic policies. Ideas have been put forward, for instance, to provide cities with streamlined access to the EFSI in order to finance energy efficiency. In its Energy Union Communication, the Commission has stated that the EFSI should further facilitate access to finance for projects in renewable energy and energy efficiency.

## CONCLUSIONS

Due to the complicated political situation around climate and energy policy, there is still uncertainty over what the post-2020 legislative framework will look like. The 2030 legal framework must be modified to fit the political reality expressed in the European Council's Conclusions of October 2014 and there is a risk that some current legislation could be weakened or done away with.

The European Council agreed to a binding GHG target, raising its ambition to reduce 'domestic' GHG emissions by 'at least' 40% by 2030 compared to 1990, agreeing to strengthen the ETS and the ESD. However, there may be scope to keep low level ambition locked in under the ESD post-2020 through the expansion of flexibilities and the inclusion of LULUCF, which together could relieve Member States from undertaking more direct additional measures that would contribute to energy-related emissions reductions.

Furthermore, the European Council was only able to agree to an EU-level target to increase the share of renewable energy consumed to 'at least' 27% by 2030. The target will only be binding on the EU, explicitly excluding nationally binding targets for individual Member States. This will provide more national level flexibility, but it will also reduce investment certainty for economic actors in Member States that do not want to provide support for the adoption of renewable energy. The proposed governance system, if limited to light-touch streamlined planning and reporting with a non-binding process for ensuring that the 2030 targets are met, is unlikely to make up for the lost investor confidence that nationally binding targets provided.

Nevertheless, the 2030 climate and energy framework may expand the existing opportunities to support the healthcare sector in reducing its carbon footprint from energy use. The Energy Union Communication communicates a generally positive vision about where Europe's energy system needs to head in the future. Within this vision is a much stronger emphasis on the need to provide energy efficiency with primary consideration in Member State policies at national, regional and local level. If followed through, the positive narrative expressed in the Energy Union Communication on energy efficiency could result in the strengthening of relevant legislation.

The Commission has also signalled a priority to focus on areas that have received insufficient attention. The forthcoming Strategy for Heating and Cooling could lead to a more robust supportive framework for high efficiency cogeneration and district heating and cooling, unlocking more opportunities to adopt renewable energy technologies. Furthermore, if consumers are empowered through retail market redesign and a stronger legislative framework supporting demand side response, the healthcare sector could be provided with more incentives to manage consumption more wisely and benefit from providing flexibility services. Finally, the Commission will attempt to develop a holistic road transport package and review of legislation, looking to tighten CO2 emission standards, enhance fuel efficiency, increase deployment of alternative fuels, and facilitate a more robust market for electric transport to assist with sustainable public procurement.

Translating the Commission's vision into a climate and energy package for 2030 will be no easy task. Nevertheless, with the EU's long-term need to achieve 80-95% reduction in GHG emissions by 2050 in mind, it will be necessary to create a strong legal framework that encourages action across all sectors.

## CHAPTER 3

# POLICY RECOMMENDATIONS

In order to help the healthcare sector commit to further reducing its carbon footprint after 2020, the following recommendations are needed from the 2030 Climate and Energy Package.

## 1

At a minimum, legislation such as the Energy Efficiency Directive, the Renewable Energy Directive, the Energy Performance of Buildings Directive, and the Ecolabelling and Ecodesign Directives must be retained as part of the 2030 legal framework. Without nationally binding targets, secondary legislation must be strengthened in order to drive implementation of additional measures that will be needed to effectively deliver the EU's increased ambition for 2030.

## 2

The Commission needs to follow through on its commitment to step up oversight and enforcement to ensure full implementation of legislative requirements so that the healthcare sector (and other actors at local level) is encouraged to play a meaningful role in achieving low carbon energy objectives. Member States need to be held to account for failure to comply with existing and future EU legislation on energy efficiency, renewable energy (including planning and reporting) and climate protection. Governance must be accountable, transparent and based in the rule of law in order to ensure that Member State inaction does not compromise delivery of the 2030 EU-level targets.

## 3

The EU legal framework on GHG emissions reductions needs to drive implementation of additional measures on energy efficiency and clean energy at national level. Upon review in 2016, national ambition for economy-wide emissions reductions under the Effort Sharing Decision should be strengthened and eligibility for using flexibilities should be reduced, although offset projects within the EU, particularly those that focus on enhancing energy efficiency and renewable energy at local level, should be explored. Due to its potential to lower overall national level ambition, Land Use, Land Use Change and Forestry (LULUCF) should be accounted for differently from emissions associated with industrial use of fossil fuels.

## 4

The EU-level 2030 framework should focus more attention in areas such as buildings and renewable heating, cooling and transport. The establishment of sector-specific targets for buildings and transport would provide a strong framework for incentivising national measures in those areas. The legislative framework for heating and cooling including the Renewable Energy Directive, Energy Efficiency Directive and Energy Performance of Buildings Directive needs to mandate more action by Member States to encourage planning and support development at local and regional levels – in particular around modernisation of heating systems and the undertaking of deep renovations.

# 5

EU legislative provisions on demand side response need to be strengthened for the post-2020 context. Retail market redesign needs to result in requirements that Member States create appropriate and fair conditions for consumers to participate in demand side response, including dynamic pricing and market incentives. Furthermore, legislation should ensure that consumers have access to proper information so that they can better understand how to effectively participate to provide flexibility services and manage consumption more intelligently.

# 6

Post-2020 EU legislation and policy needs to better support public procurement of renewable electricity, heating and cooling particularly through self-production. There is a need to better communicate the value of production for self-consumption and the role it can play in helping to improve energy performance in buildings, particularly from the public sector.

# 7

Relevant legislation and policy need to make it easier and understandable for public and private entities to access finance to support local energy efficiency and renewable energy projects, particularly through Structural and Cohesion Funds. The forthcoming EFSI and 'Smart Financing for Smart Buildings' initiative must also be sufficiently targeted at local level actors in order to facilitate access. Beyond Juncker's €315 billion investment plan, there is a need to create specialised financial instruments to incentivise investments that will contribute towards 2030 energy efficiency objectives.

# 8

In its forthcoming road transport package, the Commission should propose much stronger fuel quality and efficiency standards and improve the framework for establishing sustainability criteria for biofuels at national level. Furthermore, it should facilitate a more robust market for electric transport, including public procurement, and incentivise and support the development of appropriate infrastructure such as charging stations.



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13. For the Renewable Energy Directive, Member States must develop a National Renewable Energy Action Plan (NREAP); for measures and policies under the Energy Efficiency Directive and the Energy Performance of Buildings Directive, Member States must develop a National Energy Efficiency Action Plan (NEEAP).
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# NOTES



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Health Care Without Harm (HCWH) Europe is a non-profit European coalition of over 70 hospitals, healthcare systems, healthcare professionals, local authorities, research/academic institutions and environmental and health organisations.

HCWH Europe works to transform the health sector so that it becomes ecologically sustainable and a leading advocate for environmental health and justice across the globe.

Health Care Without Harm gratefully acknowledges the financial support of the European Commission. HCWH Europe is solely responsible for the content of this document and the views expressed do not reflect the official views of the European Commission.

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