

## **Keynote speech by Mr. Scott Foster, Director of UNECE Sustainable Energy Division**

Good morning. Thanks to NAPHN for inviting the United Nations to join your annual forum. We are delighted, enthusiastic and invested. Special thanks to Bronwyn Barry for sorting out our participation.

The UN has developed a set of framework guidelines for buildings that are expected to be transformative. The guidelines were inspired and shaped by this community.

Over the summer at the Future Energy Expo in Astana, Kazakhstan, energy ministers and the forum endorsed the framework guidelines, and just last week our intergovernmental committee on sustainable energy added its endorsement. The document is now a UN document. It is up to us to carry it forward to create a new reality at a global level.

We are pleased to have the senior leadership of the UN with us today in a demonstration of the commitment of the organization to this programme.

Amina J. Mohammed is the Deputy Secretary-General of the United Nations. She is a former Minister of Environment of Nigeria. Previously, Ms. Mohammed was a key player in the post-2015 development process, serving as the Special Adviser to UN Secretary-General Ban Ki-moon on post-2015 development planning. The 2030 Agenda for Sustainable Development agreed by all of the countries of the United Nations, sets targets in a wide range of areas. Ms. Mohammed has been instrumental in driving the 2030 Agenda. While she is not able to join us in person today, she has prepared a video message to convey her own commitment to this cause. The objectives all relate to quality of life, and as I expect we will hear in her remarks, housing is a critical element of most of the sustainable development goals.

[See video of the Amina Mohammed presentation].

Our second speaker from the United Nations joins us live from Geneva. Mr. Michael Moller is the Under-Secretary-General of the United Nations and the current Director-General of the United Nations Office at Geneva (UNOG). Since the General Assembly adopted the 2030 Agenda for Sustainable Development in 2015, Mr. Møller has promoted Geneva as the operational hub for the Global Goals. Over 70 organizations in Geneva are directly working to achieve the 17 Sustainable Development Goals.

According to Mr. Møller, Geneva not only brings to bear an unprecedented wealth of technical expertise and institutional know-how, but is also uniquely suited to forge the kinds of partnerships needed to reach the SDGs. Under his leadership, pursuing the Global Goals has become a priority for UNOG. I anticipate his remarks will reflect both a transformational vision and the commitment of the UN to enable the transformation. Mr. Moller, the floor is yours.

Thank you, Mr. Moller, for joining us today.

Ladies and Gentlemen, the organizing theme I have used for my own remarks is one of journeys, or pathways.

I have come back to the Bay Area after a long time away. Seeing all the changes that have taken place since I left, it reminds me of a book called *Look Homeward Angel*. The basic theme is that you cannot go home again because everything you knew, the people, the infrastructure, the whole social fabric, changes in your absence, and what you called home does not exist anymore and you were not party to the changes.

So let's revert to my theme of journey's. You could legitimately argue that I should use AC/DC's Highway to Hell as a headline given the state of climate change and the state of geopolitics. But because we are in California we really have to have an optimistic view of the future.

The outline of my remarks refers to four journeys, which I like to think of as ways to approach the challenges ahead. The descriptions I will use are:

1. When you come a fork in the road, take it.
2. A journey of a thousand miles begins with a single step.
3. All roads lead to Rome.
4. The Road not Taken.

Before I launch on those journeys there are some sobering realities that must shape our thinking.

I read a news story in the New York Times earlier this year. Since 1964, for the past 644 months, there has never been a single month whose global average temperature was not higher than the global average for that month for the previous 50 years. Mathematically that means that the 50-year average has been rising inexorably since 1964. This is not a new problem that emerged in the 80's or the 90's. We just were not aware of it. We have now moved into a dangerous red zone. Last March was already two degrees above pre-industrial levels – our current path is not towards a 2 degree target or a significantly less than 2 degree target but rather more towards a 4 to 6 degree level. Highway to hell indeed, but if there is any community in the world that can turn the trend it is the people in this room.

By 2050 it is expected that the world's population will have risen to 9 billion! And it is expected that 70% of humanity will live in cities. If we do the math, that is the equivalent of adding 235 cities the size of greater Paris to the planet. Clearly getting the building energy efficiency equation right is critical!

At the same time, we must recognize that 80% of today's energy is fossil-based. There is no plausible scenario to 2050 in which fossil energy's share of total primary energy supply falls below 40%, even in a two degree scenario. The number of countries and the number of people whose national incomes and livelihoods depend on fossil energy is important, and we cannot expect them to abandon their quality of life ambitions. Our challenge is complex.

So let's return to my four journeys.

The first is the fork in the road. That is a quote from Yogi Berra. It turns out he did not mean anything specific by it. For our purposes, however, coming to a fork in the road implies having to choose between one path or another. By saying "take it", we mean that we do not have choices to make – every technology has an important role to play in the future energy system, not only the obvious ones like energy efficiency and renewables, but also advanced fossil technology, carbon capture and storage, and nuclear power. This is the fork in the road. We do not have the luxury of choice. We are obliged to choose all technologies and ensure they make the best possible contribution to the 2030 Agenda for Sustainable Development, which includes both the Paris Agreement on Climate Change and the development agenda.

Importantly action cannot wait. In terms of urgency, the clock is at 10 past midnight. The second journey is the one in which a journey of a thousand miles begins with a single step. The underlying driver for the UN's framework principles for energy efficiency standards in buildings started with and was inspired by this community. If there is one action that can move the dial on both climate change and on quality of life, it is improving building performance. Buildings are central to meeting the sustainability challenge. Meeting buildings' energy needs results in 40% of CO2 emissions. The framework principles developed at UNECE reflect best practices in the building industry. The principles shift the building industry paradigm from fragmented and serial to holistic and integrated. They are only three pages long, and so they are relatively simple but powerful. I invite you all to read them. In summary, the principles are set forth in three high-level categories: buildings must be strategic, based on science and actual performance, their construction and conception must be holistic and integrated with their built environment, and they must be maintained over their life-cycle. These principles were developed by a core group of professionals and have now been endorsed by the UN's intergovernmental processes. We must now work to act on the recommendations. The program going forward involves dissemination, education and training, research, case studies, and performance benchmarking.

Another topic in that same category is methane management in the extractive industries. Methane is responsible for 27 percent of global warming. Though not all methane emissions are from the energy sector, proper management of methane emissions in the extractive industries would make an important near-term contribution. Optimal management of the fossil system from source to use, including the upstream resources through to transformation and end-use would make an extraordinary near-term contribution. It would also make an important contribution to energy security. I could continue with a more extensive list of specific actions, but the point is that we know today a number of key actions that would make real differences quickly – let's get on with it.

The third journey is the one in which all roads lead to Rome.

It is important to recognize that national circumstances vary significantly and the choices made to meet commitments under the 2030 agenda and the Paris Climate Agreement will not be homogeneous, especially with respect to treatment of fossil energy or nuclear power.

So, we are not all on the same path. Nevertheless there are some aspects that will be, or at least they should be (!), common to the various paths.

First, choices must be economically rational for each country. While we can make things happen if we throw enough money at them through subsidies, that is not a long-term sustainable approach either financially or in terms of outcomes.

Second, though we are talking about energy, because energy underpins the whole 2030 agenda we are in fact talking about quality of life. Our objectives, whatever nation we are in, are to enhance the quality of life of our citizens. As we have heard from Ms. Mohammed, energy efficiency in buildings is right at the top of the list for improving quality of life globally.

Third, rather than piling subsidies upon subsidies to encourage transformation, there clearly is a need for a real price on carbon, whether as a tax or as a market scheme. There needs to be a clear but simple price signal if we wish to steer investments and transform our energy system. As we unfortunately have seen just recently with Harvey, Irma, and Maria, without an explicit price on carbon, at some point we are already starting to pay an implicit price on carbon.

Fourth, there is a need to understand that security does not mean self-sufficiency, whether in food, energy, or any other good. We must understand the value of mutually beneficial economic interdependence. We must reinforce our rules-based multi-lateral trading system, not tear it down.

For energy, it is critical that we think in terms of a wholly-interconnected system in which supply, demand, conversion, transport/transmission, interact freely and flexibly. This applies within regions and sub-regions but also between regions.

Finally, we must have emotional intelligence when devising our approaches to the 2030 Agenda for Sustainable Development or the Paris Climate Agreement. All nations are committed and have put together their plans. It is necessary that each recognizes the perspectives and the drivers of the others, that there is not a single approach but a multitude of approaches. What truly matters is that the collective outcome delivers the needed results. And that each player, each nation is doing its part.

We can speak of two gaps today. There is one gap between what countries have committed to and what they are actually doing, and there is a second gap between the commitments and what is truly needed to deliver. We gathered energy ministers in June to make commitments from the energy sector to close the gaps. One of the critical items where ministers showed leadership was on the Framework Principles for Energy Efficiency Standards in Buildings. And these have now been endorsed by the UN!

The final journey I would present to you is The Road Not Taken, and here I will quote from the poem by Robert Frost

*“Two roads diverged in a wood, and I  
I took the one less traveled by  
And that has made all the difference.”*

The energy industry that we witness today has succeeded in raising the quality of life around the world, most notably in the advanced economies but even in the developing world. There is more to do, of course, on access and affordability. And yet, energy today is a commodity business in which we produce and deliver cubic meters of natural gas, liters of petrol, kWh of electricity, tons of coal. Energy industry players earn their returns by producing and selling more. What is in place today shapes how we interact in the world, and we all make our decisions based on how we expect today's structures to evolve incrementally in the future. In fact, what is needed for sustainability is to reinvent the energy industry as a service industry. This is what we have seen with the revolution in telecommunications. It is a revolution

that is not finished but that has already unleashed enormous waves of innovation. We do not consume energy, we consume the services provided by energy, such as lighting, mobility, heating, and so forth. If energy could be transformed the way telecoms have, then the business model for passive houses and high performance buildings would be self-evident.

Before moving to my last segment I would like to tell another story. My father used to tell me when he was a young man in Alabama his household had neither running water nor electricity. Imagine your own lives without some of the things you take for granted today! Now wind the tape forward just one generation, to my own children sitting on the couch with their smartphones texting friends and the like, certainly not doing their chores! I suppose we call that progress.... If we have made that degree of progress in one generation, then I am convinced that we can meet the challenges of the 2030 Agenda and the Paris Climate Agreement. Yes we can. Yes we will. But we must work together collaboratively to make it happen.

I mentioned Look Homeward Angel at the outset saying you can never go home again. The inverse of that is always true. You can choose the environment you want to become a part of. You change the tapestry at your destination by blending into it and shaping it. We have started a movement with this programme, one of transformational change in how we do buildings, and it is time to extend the movement. Let us all be the tapestry that changes the world.

I want to enlarge on this as it is something our speakers emphasized: the importance of collaboration to achieve sustainability.

- First, we need a truly global transformation.
- Next, we need to implement a new conception of buildings.
- Finally, the people of the world cannot be coerced into sustainability – the transformation needs to be voluntary.

The stakes make success imperative, but those three conditions make it dependent on collaboration on a broad scale in creating a new global culture for the built environment – one with deep roots and buy-in.

The UN Framework Guidelines are a good point of departure. They project a new reality of science-based, high performance buildings across the developed and developing world.

They project a new kind of building delivery, maintenance and improvement throughout the life cycle and they imply a new approach to finance, standards and codes.

To realize the vision of the Framework will require advances in knowledge, know how, and education on a broad scale. That means engaging many people in this mission.

Penn State, the home of the world's top ranked architectural engineering department and much besides, has stepped forward to play a crucial role by leading a global research consortium to advance the science and to educate the next generation of architects and building contractors.

We are also working to coordinate a global network of UN Centers of Excellence to provide education, support and know how in the field – beginning with Centers in New York, Vancouver, and Wexford Ireland and expanding to Brussels and other targeted cities.

This work will be supported by launching an online education platform for the project and developing real life case studies.

Our hope is that you will carry the word of what is happening and you will grab an oar to advance this enterprise. Bronwyn Barry, Ken Levinson, and the other NAPHN officials can help you find the right portals through which to enter the project.

I would like to thank the organisers for inviting the United Nations to participate today. We are committed to this movement. Together we can make it happen.

Thank you.