

DIALOGUE REPORT:

100% RENEWABLE ENERGY IN CITIES



7 December 2015 | Cities and Regions Pavilion – TAP 2015 | COP21, Le Bourget, Paris



Cities & Regions
Pavilion - TAP2015



CENTRE FOR DIALOGUE
SIMON FRASER UNIVERSITY



INTRODUCTION

While national governments worked to negotiate a new international agreement on climate change at COP21, mayors from around the world came to Paris to show that a global movement of local climate action is already underway. For the first time, a United Nations climate conference recognized that cities and local governments have the capacity to make a global contribution to mitigating climate change.

A growing number of cities and local governments around the world are making plans for ambitious transitions towards renewable energy, including moving to 100% renewable energy. To profile this movement at COP21, our three organizations, Renewable Cities, ICLEI – Local Governments for Sustainability (ICLEI), and the World Future Council (see Annex 1 for details), brought together a diverse group of local governments that share this ambition for a peer-to-peer dialogue in Paris. The dialogue was a key activity of the 100% Renewable Energy Cities and Regions Network, in the context of the Global 100% Renewable Energy Campaign.

The participants in this dialogue were represented by the following local governments:

- Aspen, United States of America
- Australian Capital Territory, Australia
- Byron Shire, Australia
- Cape Town, South Africa
- Curitiba, Brazil
- Jeju Province, Korea
- Kaohsiung, Chinese Taipei
- Malmö, Sweden
- Medellín, Colombia
- Paris, France
- Tshwane, South Africa
- Vancouver, Canada

Also included was the Natural Resources Defense Council of China.

A full list of the participants is given in Annex II. More data on the population and the renewable energy plans of the participating local governments is given in Annex III.

The dialogue proceeded through five rounds of discussion. The following is a summary of the main points made in each round.

ROUND ONE: CHALLENGES OF MOVING TO 100% RENEWABLE ENERGY FOR CITIES AND REGIONS

The participating cities were asked to introduce themselves and to share one major challenge for planning to move to 100% renewable energy.

For **Vancouver**, one of the major concerns was not having access to sufficient sources of renewable energy within the city boundary in the future, as well as the lack of jurisdictional control over energy supply.

Cape Town cited challenges around housing and transportation, as well as the lack of jurisdictional control with energy being a competency of the national government in South Africa.

Byron Shire mentioned their struggle with the competition from “cheap” coal, as they have a one-way system from coal to user. Some vested interests in fossil fuels impede the transition to renewable energy by creating barriers to decentralizing power production and local grids.

Jeju Province has the ambition to be a carbon-free island by 2030, by integrating smart grids, renewable energy, and electric vehicles. Their challenge is to establish this plan and to garner the substantial funding necessary. This requires political will from the national government in the Republic of Korea, as well as engagement with the private sector. The conversion of land transportation to accommodate electric vehicles is also a major challenge.

Kaohsiung is a heavy-industry city and highly dependent on imported fossil fuels, and their challenge lies precisely in the need to transition these industries away from fossil fuels with a strong need to promote energy efficiency and decrease energy intensity.

Tshwane has rich coal endowments and coal remains the cheapest way to generate electricity,

making it difficult to justify the price of renewables. Another challenge for Tshwane is how to deal with regulatory barriers and competing development needs.

Malmö outlined how the political will nationally is their biggest challenge, another one will be the transition to renewables for cars and housing.

The **Australian Capital Territory** is proud to be on track to achieve its target of 90% of electricity consumed from renewable sources by 2020. Market signals and the absence of long-term certainty on national emissions reduction policies have been identified as key challenges to implementing efficient, robust, local policies.

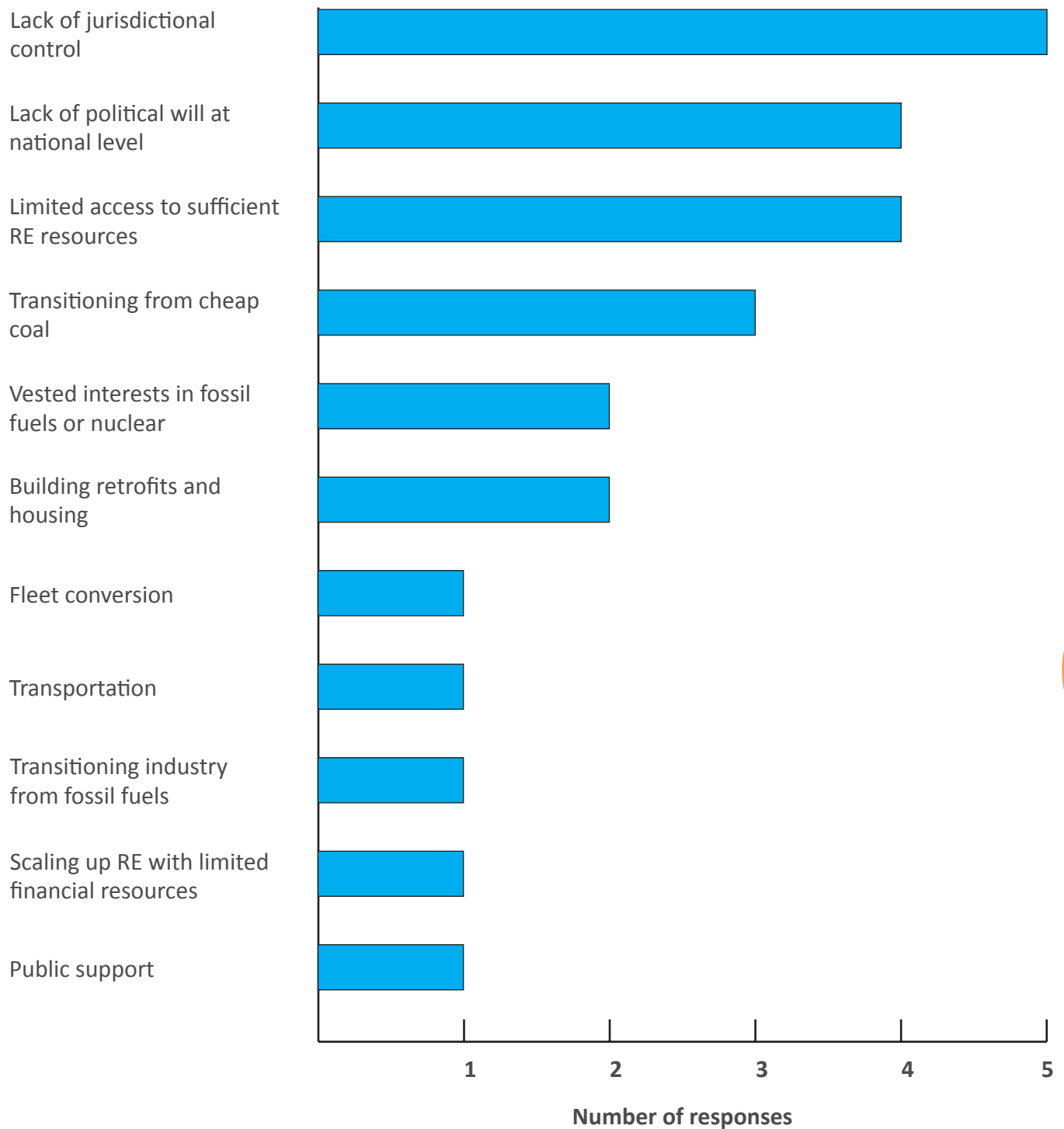
For **Paris**, the challenge is to both reduce energy consumption and develop new renewable energy production systems. France has a national, centralized electricity system and relies heavily on nuclear power, making collaboration with sub-levels of government on renewable energy challenging.

Aspen is proud to be already 100% renewable for electricity but sourcing an adequate supply of energy is a challenge. National political will in the USA is also a major challenge.

Curitiba faces criticisms for its goal of having 100% biodiesel in its Bus Rapid Transit fleets as there is an impact on fares.

According to the Natural Resources Defense Council of China the major challenge for **Chinese cities** is their coal consumption and how to transition away from coal, in cities of different sizes and with different climatic conditions.

FIGURE 1 – MAJOR CHALLENGES FACED BY CITIES IN MOVING TO 100% RENEWABLE ENERGY IN NUMBER OF RESPONSES PER THEMATIC CHALLENGE





ROUND TWO: SUCCESSFUL STRATEGIES FOR ENGAGING OTHER LEVELS OF GOVERNMENT TO SUPPORT 100% RENEWABLE ENERGY

When asked about the successful strategies they had implemented to deal with the challenges of working with different levels of government, participating cities cited the following:

- The use of pilot projects to demonstrate the feasibility and business case of moving to 100% renewable energy, such as creating districts within cities where models that engage all levels of society, including businesses and the local population, are tested to demonstrate the feasibility of 100% renewable energy in cities.
- Working in cooperation with other local governments to create scale and lobbying power to influence national policy.
- Working with all political parties to influence national policies.
- Making a business case for utilities to move from fossil fuels and the traditional electricity providers to renewable energy resources and alternative energy service providers. These include district energy systems and decentralized electricity generation coupled with local grids.
- Modeling how projects can include both centralized generation in large urban areas and decentralized systems or co-generation in more remote areas.
- Partnerships to engage the private sector's expertise and financing capacity.

Vancouver worked with political parties that support their commitment and noted that the voice of local government was important in the national discourse.

In **Cape Town**, the city is a distributor of electricity and one third of their revenue comes from electricity. So, the city has decided to regard decentralized power generation as an opportunity rather than a threat, and to move to providing energy services.

In **Australia** there are three levels of government. While action at the state level can help the national government meet its targets, municipal councils can also learn from each other, thus building momentum across the different cities. One strategy **Byron Shire** implemented was a virtual metering system. The City worked closely with the State and the energy provider to set up a trial site for this particular virtual metering system. This pilot project is becoming a model for other jurisdictions. In the **Australian Capital Territory (ACT)**, they chose to take a regional approach, sourcing renewable energy from generators in neighbouring states. In addition, the ACT is working with state and territory governments, as well as the national government, to ensure that policies to reduce emissions in the energy sector are efficient, effective, and able to adapt to the emergence of new technologies and energy supply models.

Malmö chose to create a district, the Western Harbour, within the city where the private sector agreed to become renewable. The City collaborated closely with the developers as well as the residents to help redevelop this area.

According to China's National Resources Defense Council, the supply of renewable energy is a challenge in **China**. Decentralized energy would work better for remote areas. One option would be to have a combination of distributed centers and centralized systems.



ROUND THREE: WHAT ARE CITIES MOST PROUD OF?

Paris:

Proud of the development of solar panels (15,000 square meters) and of their huge retrofit operations since 2000 (30,000 social units have been retrofitted). Paris is also proud of their innovative ways of linking district heating, district cooling, and non-potable water supply.

Malmö:

Proud of the Western Harbour, which has been 100% renewable for 15 years now. Malmö is also proud to have combined social and energy innovation for a project, which has resulted in benefits for residents, including local employment development.

Byron Shire:

Proud of their zero emissions project and proud to have the first community-owned renewable energy retailer in Australia. The political will is in the DNA of the community and is driving the actions taking place on the ground. They are also proud to be taking a holistic approach to carbon emissions by looking at all major sectors, namely energy, buildings, transport, waste, and land use.

Australian Capital Territory:

Proud to have developed a nation-leading reverse-auction framework, which has delivered record low prices for renewable energy in Australia, and that will set the Territory on a path to be powered by 100% renewable energy by 2025.

Tshwane:

Proud of the extent to which they were able to convince ordinary citizens that renewables are a desirable option.

Cape Town:

Proud of the good results obtained with lighting LED mechanisms in the city.

Medellín:

Proud to have a totally public energy service that is sustainable because 50% of the profits of the company are invested in social services for the city. They are also proud of the great electric transportation system in their metro.

Curitiba:

Proud of their world-renowned public transportation system and proud to be working on 100% biodiesel for buses.

Vancouver:

Proud that despite a regulated utility and cheap natural gas for electricity they developed a district energy system using heat capture from sewage. The city demonstrated a clear business case for renewable energy projects. The private sector is taking on the challenge and driving the project now. Vancouver is also proud to have brought their citizens along through three civic elections and proud to be providing leadership internationally on renewable energy.

Jeju Province:

Proud to have established wind power through a local public corporation and of their efforts to transition to 100% renewable energy. Jeju Province is also proud to have 1.2 million tourists visiting Jeju Island every year.

Aspen:

Proud to be 100% renewable. It took vision from previous political leaders and it took leadership. The last 25% was the hardest to achieve given that the city is actually small. Success was not a factor of the number of residents but rather of the quality of residents. Aspen is a rural community that built a big renewable transit system while promoting a multi-modal approach to transportation. The city also has a carbon fee that goes into a carbon mitigation fund.

Kaohsiung:

Proud of their sunshine! Kaohsiung is proud of the actual policies, compensation and financial support to adopt renewable energy. The city promoted green buildings through financing and amended municipal policies to enable that.

China:

China's Natural Resources Defense Council is proud that China is the number one renewable producer in the world—and has the most competitive solar PV in the world.





8

ROUND FOUR: WHAT QUESTIONS WOULD THE CITIES ASK THE OTHER PARTICIPANTS IN THIS DIALOGUE?

Q. How do you fund a complex transportation system when you have a small tax base?

A. Have a dedicated sales tax for transportation and have matching funds when making a request to other levels of government.

Q. How do you convince local communities to move to 100% renewable energy?

A. Speak with community leaders and make the case for future prosperity. Pay for electricity for the most vulnerable populations. Invite local residents to take ownership or have a stake in the corporation managing renewable energy production and supply. The latter has proven very effective in promoting acceptance of wind farms by local communities.

Q. How do you manage load variability?

A. Have backup throughout the national grid; diversify the energy mix and have the potential to use conventional sources of energy during the transition.

Q. How do you deal with regulatory and network issues when you have a 2-way grid system?

A. Have a dialogue with the local utility and move to a services provider model.

ROUND FIVE: WHERE DO CITIES NEED MORE SUPPORT IN THEIR EFFORTS TO MOVE TO 100% RENEWABLE ENERGY?

Paris seeks more information sharing between cities and ideas on how to scale projects. They would like to organize a political lobby that could influence states and could fight economic lobbies resisting cities going to 100% renewable energy, in particular the very powerful nuclear lobby in France.

The **Australian Capital Territory** wants to find a way to lobby their national government to support cities at sub-national levels.

Curitiba wants to bring more awareness to their population about renewable energy. Their challenge is that their population is accustomed to “cheap” hydro-electricity and does not see the business case for other renewables.

Malmö would like to see more sharing between cities on what has been successfully done. They also want to bring more awareness and education to politicians.

Medellín stressed the need for cities to collaborate as much as possible, underlining how different South American cities may be from European and North American cities. Collaboration is key, as is sharing knowledge and good practices.

Tshwane called for more knowledge sharing given their skill deficit. They also called for liberalization of their regulatory framework so they can initiate more interventions. They need support with advocacy in this respect.

Kaohsiung asked for more support regarding energy policy and technical support in solar and wind generation.

Jeju Province is looking to exchange ideas and share best practices with other islands that have moved to renewable energy.

Aspen stressed their responsibility to share their accomplishments. They emphasized the need for more collaboration and help to get the word out in order to amplify the good news. They also called for help to develop a strong national accord.

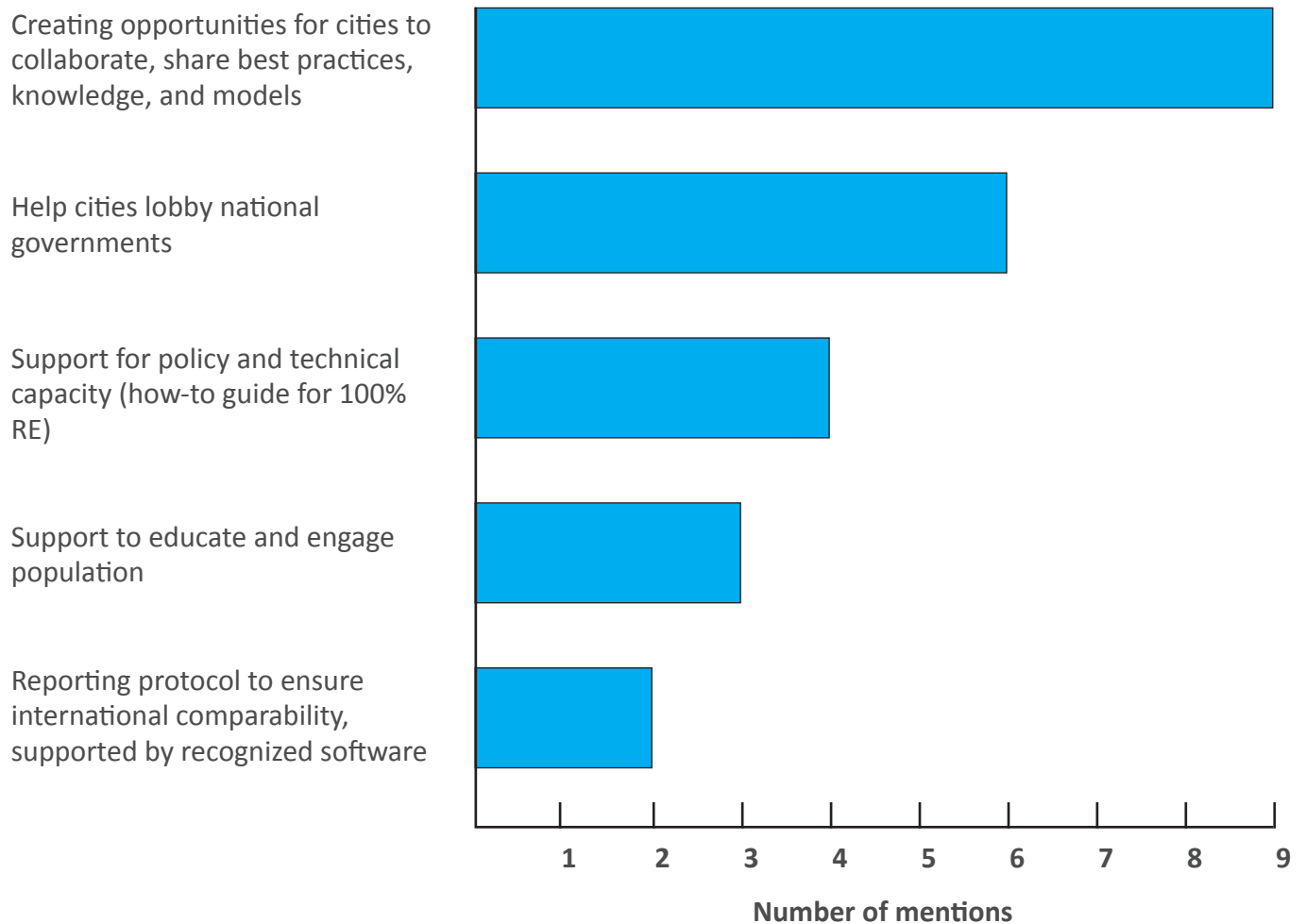
Byron Shire called for the creation of an international group of practitioners. They wish to see more how-to models on moving to 100% renewable energy. They will need political support from the national and state levels, as well as funding and help with regulatory barriers. They would also like to see the development of a modelling software that is globally accredited to monitor and measure renewable energy.

Cape Town called for changes in their national government’s energy procurement policy. They would also like to learn from other cities on how to move to an energy-services model, as well as to share policy knowledge.

Vancouver underlined that in-person knowledge sharing is more effective for city staff than remote or online meetings. Funding for city staff to attend such meetings would also be a positive contribution from host organizations. They called for more information on building efficiency, retrofits, passive house designs, and transportation fuels. They emphasized the need for help to connect with their citizens. As an example, they would love for Aspen to write a letter to Vancouver’s residents. The city also called for a global independent verifier of cities’ successes in implementing 100% RE plans.

China’s Natural Resources Defense Council wants to see more collaboration between sub-national and national levels. They also called for more support regarding smart grids, renewables, and low-carbon dispatch.

FIGURE 2- AREAS IN WHICH CITIES NEED SUPPORT, NUMBER OF MENTIONS PER THEME



CONCLUSION

Following the successful negotiation of the Paris Agreement at COP21 and the adoption of the United Nations' new Sustainable Development Goals, cities are more than ever at the forefront of innovation in renewable energy and energy efficiency.

During this particular dialogue, we heard from cities that have already achieved 100% renewable energy in some capacity. We also heard from cities that are at very different stages of adoption of renewable energy targets. (Details about the renewable energy plans of the participating governments are given in Annex III). Although local circumstances vary, most share similar hurdles and aspirations for their communities.

What we heard from all of these governments is a very strong demand for more collaborative spaces for them to share knowledge and build capacity. Facilitating policy dialogue across national borders is particularly important for local governments to fill skill and knowledge gaps, connect with peers, and profile and communicate success stories. There is a strong sense that more lobbying is needed to facilitate discussions with higher levels of government. Cities need more financing, support, and collaboration to help them achieve the goal of 100% renewable energy.

The Global 100% Renewable Energy Cities and Regions Network was launched at ICLEI World Congress 2015 in Seoul in April 2015. In the context of the Global 100% Renewable Energy Campaign, the Network brings together ambitious local and subnational governments in a community of practice, enabling them to exchange with other cities, regions, and experts on integrated technical and policy solutions that work. They also work to leverage further support for this global movement. This network already includes cities and regions such as Aspen (USA), Byron Shire (Australia), Jeju

Province (Republic of Korea), Malmö (Sweden), City of Tshwane (South Africa), and Vancouver (Canada). Building on synergies and cooperation between different organizations collaborating in this global campaign, the cities, towns, and regions that join the 100% Renewable Energy Cities and Regions Network will thus have access to other opportunities for knowledge sharing. This includes in person and remotely, and access to resources, thematic guidance, and facilitated connections to experts.

To ensure the interests and priorities of your local or subnational government and community are considered in future Network activities, you are invited to apply to join. By joining, you will be able to take advantage of future Network opportunities.

If your administration has made a political commitment towards 100% RE, or has a strong interest in exploring such pathway, we encourage you to join the 100% Renewable Energy Cities and Regions Network. Interested cities and regions are also encouraged to report their targets, actions and performance in the carbonn Climate Registry (cCR) at www.carbonn.org (or update existing profile). The cCR is a free global reporting platform for climate action by local and subnational governments. It feeds into periodic aggregated reports shared with the UNFCCC.

The three organizations that convened this event are committed to further opportunities for dialogue and knowledge sharing to help cities and local governments move towards 100% renewable energy. For more information about future activities relating to cities, regions and 100% renewable energy, please contact the following individuals:

ICLEI: Ana Marques, ana.marques@iclei.org and carbonn@iclei.org | **World Future Council:** Anna Leidreiter, anna.leidreiter@worldfuturecouncil.org | **Renewable Cities:** Michael Small, michael_small@sfu.ca

ANNEX I: CONVENING ORGANIZATIONS AND INITIATIVES

ICLEI – Local Governments for Sustainability

ICLEI is the world's leading network of over 1,000 cities, towns and metropolises from 86 countries committed to building a sustainable future. By helping our Members to make their cities sustainable, low-carbon, ecomobile, resilient, biodiverse, resource-efficient, healthy and happy, with a green economy and smart infrastructure, we impact over 20% of the global urban population. We connect local governments to exchange, motivate and peer-learn both at the political and technical level. ICLEI has 17 offices around the globe that provide technical support on a diversity of themes, also advocating to improve recognition, engagement and empowerment of local governments in tackling climate change and the sustainable development agenda.

www.iclei.org

Established in 1990, with a quarter century's experience in supporting local climate action worldwide, the focus today is on enhancing integration of energy efficiency and optimizing renewable energy into urban policies and plans. We bring together cities, towns and regions that are driving the transition to a 100% Renewable Energy future, to form a community of practice that can help accelerate progress. ICLEI leads the 100% Renewable Energy Cities and Regions Network, and invited champions and learning cities, towns and regions to connect.

www.iclei.org/lowcarboncity/100re

World Future Council

World Future Council (WFC) brings the interests of future generations to the centre of policy-making. It addresses challenges to our common future and provides decision makers with effective policy solutions. In-depth research underpins advocacy work for international agreements, regional policy frameworks and national lawmaking, thereby producing practical and tangible results. In close collaboration with civil society, parliamentarians, governments, business, and international organizations, the World Future Council identifies “future just” policies around the world. The results of this research then feed into our advocacy work, supporting decision-makers in implementing those policies.

www.worldfuturecouncil.org

Renewable Cities

Renewable Cities is a new global program of the Centre for Dialogue, Simon Fraser University in Vancouver, Canada. Renewable Cities aims to accelerate the adoption of 100% renewable energy by cities globally. The program recognizes that an integrated approach to energy efficiency and urban design is required to achieve this goal. This global program has been developed through dialogue with leaders in local government, the private sector, utilities, innovators, and thought leaders.

www.renewablecities.ca

Global 100% RE campaign

All of the three organizations (ICLEI, World Future Council, and Renewable Cities) are part of the Global 100% Renewable Energy campaign. This campaign is among the first global initiatives that advocates for 100% renewable energy. It connects the dots of dispersed renewable energy advocates and builds on a highly visible global alliance that confirms being powered by 100% sustainable renewable energy is both urgent and achievable. It builds on initiatives already taking place on national, regional and local levels, and sets a global discourse on renewable energy towards 100% RE as the new normal. The Global 100% RE campaign aims to initiate dialogue, build capacity, and educate policy makers about the ever-increasing number of case studies from around the world, to promote the benefits of transitioning to 100% RE, and to clarify what that transition actually means for local governments.

www.go100re.net

100% Renewable Energy Cities and Regions Network

Building on already existing networks and initiatives, this network brings together cities, towns and regions that are driving the transition towards 100% Renewable Energy, enabling them to network and exchange with other leading cities and experts on a global scale thus forming a community of practice to support and accelerate further progress. The network is inclusive and open to all ambitious cities, towns, and regions setting their course towards 100% Renewable Energy and demonstrating that it is possible to realize this vision. Joining is by invitation only. If you are interested, please contact us via 100re.network@iclei.org. There is no fee to join the network. Additional services may be offered at a fee. The 100%RE Cities & Regions Network is part of the Global 100% Renewable Energy Campaign.

www.iclei.org/lowcarboncity/100re

About COP21

COP21- The twenty-first session of the Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change took place from 30 November to 11 December 2015, in Paris, France, and was the stage where a new climate agreement was reached.

About the Cities & Regions Pavilion – TAP2015

Running from 30 November until 11 December in 2015, this was where local and subnational governments and their partners convened to call for partnerships to accelerate the transformative change they are leading in cities and regions across the world during COP21. The City of Paris provided the stage for the largest mobilization of local and subnational leaders around a COP.

ANNEX II: PARTICIPANTS IN THE DIALOGUE

Participants	
Aspen, USA	Steve Skadron, Mayor
Australian Capital Territory, Australia	Professor Barbara Norman, Canberra Urban & Regional Futures Director, University of Canberra
Byron Shire, New South Wales, Australia	Simon Richardson, Mayor
Byron Shire, New South Wales, Australia	Stephen Bygrave, CEO, Beyond Zero Emissions
Cape Town, South Africa	Johannes van der Merwe, Councillor
Cape Town, South Africa	Lance Greyling, Director, Trade and Investment
Curitiba, Brazil	Alfredo V. C. Trindade, Superintendência de Obras e Serviços, Secretaria Municipal do Meio Ambiente
Jeju Province, Korea	Hongbae Park, General Director of Economy & Industry Bureau
Jeju Province, Korea	Hwanjun Lee, Public officer at Foreign Investment Policy Division
Kaohsiung, Chinese Taipei	Mr. Meng-Yu Tsai, Director of Environmental Protection Bureau
Kaohsiung, Chinese Taipei	Ms. Chao-Chi Hung, Project Manager, ICLEI Kaohsiung Capacity Center
Malmö, Sweden	Milan Obradovic, Deputy Mayor
Malmö, Sweden	Ms Kerstin Åkerwall, Director, Environment Department
Medellín, Colombia	Jorge Pérez Jaramillo, Director of the Planning Department of the Municipality of Medellín
Paris, France	Célia Blauel, Deputy-Mayor
Paris, France	Jean-Baptiste Lebrun, Technical advisor, Deputy-Mayor's office
Tshwane, South Africa	Kgosientso Ramokgopa, Executive Mayor
Tshwane, South Africa	Lutske Newton, Deputy Director of Research and Stakeholder Management, City Sustainability Unit
Vancouver, Canada	Raymond Louie, Acting Mayor
Vancouver, Canada	Malcom Shield, Climate Policy Manager
China's Natural Resources Defense Council	Fuqiang Yang, Senior Advisor on Climate Change and Energy, Beijing
Facilitator	
Simon Fraser University	Shauna Sylvester, Director, Centre for Dialogue
Convening Organizations	
Simon Fraser University	Michael Small, Executive Director, Renewable Cities
Simon Fraser University	Elodie Jacquet , Dialogue Convenor, Renewable Cities
ICLEI World Secretariat	Ana Marques, Senior officer
World Future Council	Anna Leidreiter, Senior Programme Manager Climate Energy
World Future Council	Stefan Schurig, Director, Climate, Energy and Cities

ICLEI Oceania	Steve Gawler, Regional Director, ICLEI Oceania
ICLEI Oceania	Bernie Cotter, Executive Director, ICLEI Oceania
ICLEI Korea	Hana Kim, Officer, ICLEI Korea
Seoul Metropolitan Government / ICLEI World Secretariat	Soojin Choi, Seoul Metropolitan Government's Liaison to ICLEI
ICLEI Africa	Grace Stead, Co-ordinator of Urban LEDS Local Leadership Initiative
World Future Council	Boping Chen, Director Regenerative Cities, China
World Future Council	Irene Garcia, Project Manager
Observers	
Sierra Club	Maura Cowley
Institute for Sustainable energy Policies, ISEP	Hironao Matsubara, Chief Researcher

ANNEX III: DATA ON PARTICIPATING CITIES AND LOCAL GOVERNMENTS

City or Local Government	Country	Estimated population	Renewable energy plans (Sector specified where known)
Aspen	USA	6,728	100% renewable electricity for both community and municipal operations by 2015 (achieved).
Australian Capital Territory	Australia	386,000	The renewable electricity target of ACT is 100% renewable energy by 2025.
Byron Shire	Australia	29,209	Byron Shire is developing a Zero Emissions strategy that will include a 100% renewable energy goal by 2025.
Cape Town	South Africa	3,740,025	The city has a renewable energy target of 10% for both the municipality and community.
(Natural Resources Defense Council)	China	759,169,683 in urban centres	President Xi Jinping announced that China intends to increase the share of non-fossil fuels in primary energy consumption to around 20% by 2030. China is currently the world's leading investor in renewable energy.
Curitiba	Brazil	1,752,500	Curitiba is in the process of developing renewable energy targets but they are not ready to report them yet.
Jeju Province	Republic of Korea	604,771	Jeju Province aims to be powered by renewable energy by 2030, including the transportation sector. The region is being used as a test grid for renewable energy and distribution, with the aim of expanding to the rest of the Republic of Korea.
Kaohsiung	Chinese Taipei	2,779,000	The city has installed the largest solar park in Chinese Taipei and is also implementing a light rail transit line that will run on renewable energy.
Malmö	Sweden	318,107	A 100% renewable energy target for municipal operations and city-wide by 2030.
Medellín	Colombia	2,184,000	Medellín does not have specific renewable energy goals, however it currently uses several forms of renewable energy, mostly hydro.
Paris	France	2,241,346	Paris has a renewable energy goal of 25% by 2020.
Tshwane	South Africa	2,921,488	The city has a renewable energy goal of 50% for government operations by 2030 and 20% renewable energy for the community by 2020.
Vancouver	Canada	603,500	Vancouver has a 100% renewable energy goal in electricity, transportation, heating and cooling, to be completed by 2050, for both the community and municipality.

References sourced for information on participating cities:

Aspen: <http://www.aspenpitkin.com/Living-in-the-Valley/Green-Initiatives/Renewable-Energy/Solar/>

Australian Capital Territory: <http://www.environment.act.gov.au/cc/what-government-is-doing/emissions-and-mitigation> | <http://www.byron.nsw.gov.au/renewable-energy>

Byron Shire: <http://www.byron.nsw.gov.au/renewable-energy>

Cape Town: https://www.capetown.gov.za/en/EnvironmentalResourceManagement/publications/Documents/Moving_Mountains_Energy+CC_booklet_2011-11.pdf

China: http://www.theclimategroup.org/_assets/files/RE100-China-analysis.pdf

Curitiba: http://www.siemens.com/entry/cc/features/greencityindex_international/all/en/pdf/curitiba.pdf | <http://sustainability.thomsonreuters.com/2015/09/29/executive-perspective-cities-face-steep-climb-to-100-renewable-energy/>

Jeju Province: <https://go100re.net/properties/jeju-province-korea/>

Kaohsiung: <http://taiwansustainablecities.blogspot.ca/2011/01/kaohsiung-taiwans-eco-city-leader.htm>

Malmö: <http://malmo.se/English/Sustainable-City-Development/Bo01---Western-Harbour.html> | http://malmo.se/download/18.31ab534713cd4aa9213d20b/1383649547546/ICLEI_Case+study+on+Malm%C3%B6+renewable+energy+2012_7_Malmo.pdf

Paris: http://www.paris.fr/municipalite/action-municipale/paris-pour-le-climat-2148#le-plan-climat-energie-de-paris_2 | On non-potable water: <http://www.eaudeparis.fr/lespace-culture/pavillon-de-leau/eau-non-potable-eau-davenir/>

Tshwane: http://resilientcities2015.iclei.org/fileadmin/RC2015/files/Framework_for_a_Green_Economy_Transition.pdf

Vancouver: <http://vancouver.ca/files/cov/renewable-city-strategy-booklet-2015.pdf>

ACKNOWLEDGEMENTS

This dialogue was held at the Cities & Regions Pavilion – TAP 2015, Climate Generations Areas at COP21 in Paris–Le Bourget, France on December 7, 2015.

It was facilitated by Shauna Sylvester, Director, Simon Fraser University Centre for Dialogue.

Principal organizers of the dialogue included:

- Ana Marques, Senior Officer, Low Carbon Cities, ICLEI
- Anna Leidreiter, Senior Programme Manager Climate and Energy, World Future Council
- Michael Small, Executive Director, Renewable Cities, Simon Fraser University Centre for Dialogue
- Elodie Jacquet, Dialogue Convenor, Renewable Cities, Simon Fraser University Centre for Dialogue

The report was written by Elodie Jacquet and reviewed by Michael Small, Ana Marques, Anna Leidreiter, and dialogue participants. It was desktop published and reviewed by Keane Gruending, Communications Manager, Renewable Cities, Simon Fraser University Centre for Dialogue

Photo credits (listed by Flickr username where applicable, all other photos courtesy of ICLEI): cover-andreaswulff (Flickr); p.4-cpakmoi (Flickr)

Photo captions:

p.1 (centre)-Kgosientso Ramokgopa, Executive Mayor, City of Tshwane, South Africa

p.6 (left to right)-Célia Blauel, Deputy-Mayor, City of Paris and Jean-Baptiste Lebrun, Technical advisor, Deputy-Mayor's office, City of Paris; Professor Barbara Norman, Canberra Urban & Regional Futures Director, University of Canberra; Kerstin Åkerwall, Director, Environment Department and Milan Obradovic, Deputy Mayor, City of Malmö; Shauna Sylvester, Director, Centre for Dialogue, Simon Fraser University; Kgosientso Ramokgopa, Executive Mayor, City of Tshwane and Lutske Newton, Deputy Director of Research and Stakeholder Management, City Sustainability Unit, City of Tshwane

p.7-Raymond Louie, Acting Mayor, City of Vancouver

p.8 (left to right)-Célia Blauel, Deputy-Mayor, City of Paris and Jean-Baptiste Lebrun, Technical advisor, Deputy-Mayor's office, City of Paris; Professor Barbara Norman, Canberra Urban & Regional Futures Director, University of Canberra



Dialogue Report: 100% Renewable Energy in Cities