

# Developing the Public Engagement Strategy for the Guangdong CCUS Demonstration Program

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## Introduction

The China Resources Power (Haifeng) and China National Offshore Oil Corporation (CNOOC) Integrated Carbon Capture and Sequestration Demonstration Project (CRP Power Project) and the UK-China (Guangdong) CCUS Centre are committed to understanding and implementing carbon capture and storage (CCS) public engagement best practice throughout the lifecycle of the CRP Power Project as well as sharing the experience with the wider CCS community.

This report presents an analysis of work undertaken by the CRP Power Project and the UK-China (Guangdong) CCUS Centre which will help guide the project's future work program. It may also be useful to other CCS project proponents in China who are considering the development of a public engagement strategy.

This undertaking is the first of its kind in China and is an ongoing process. To date, the majority of CCS public engagement project case studies have analysed activity that has taken place in Europe, North America and Australia. An important next step is to reflect on how current best practice may apply in other regional contexts.

The UK-China (Guangdong) CCUS Centre is actively investigating this topic and this report seeks to capture the processes and analysis that have occurred so far.

Part 1 is a discussion on the role of media in influencing public opinion of CCS and carbon capture utilisation and storage (CCUS) in highly populated areas in China. A workshop was held at the Guangdong CCUS Centre in December 2014 with a range of influential project stakeholders including project developers, members of the Chinese journalism community and local and international public engagement experts and researchers. Stakeholders were asked to share their experiences of public communication for energy infrastructure projects in China, and discuss how journalism, the internet and social media all influence public trust. The first report captures the outcomes and recommendations from this workshop.

Part 2 reviews the suitability of the Global CCS Institute's Communication and Engagement Toolkit (the Toolkit) for application within the Chinese context drawing on the experiences of the CRP Power Project. The review does not include all Toolkit recommendations as the development of the public engagement strategy is an ongoing and iterative process.



# Part 1: The role of the media in influencing public opinion of CCS/CCUS in highly populated areas in China

## Background

Developing large infrastructure projects in an efficient and cost effective manner has been a key driver for Chinese economic growth over the last three decades. In November 2014, the National Development and Reform Commission (NDRC) authorised plans to spend almost \$115 billion on 21 supersized infrastructure projects including new airports and high-speed rail lines.<sup>1</sup> A significant challenge to the actualisation of a number of these proposed energy infrastructure projects has been local opposition, causing delays and cancellations. There has been a noticeable rise in ‘not-in-my-backyard’ (NIMBY) situations and conflicts that have arisen around a specific locality - most often prompted by the local community<sup>2</sup> – a stakeholder group traditionally perceived as less prone to public opposition in China.

One example of public opposition to infrastructure developments was the Yunnan province Nu River Dams power generation project. On 14 March 2003, the China Huadian Corporation signed a *Memorandum of Understanding for Exploring Electricity Generation in Yunnan* with the Yunnan provincial government to build 13 dams on the Nu River, aimed at providing hydropower of 21 million kilowatts (total installed capacity) and assisting the development of the local economy. By August of that year, the project was facing concerns over how planned works might affect the river, and the conflicting priorities of project development and river conservation became highly visible at the national level.<sup>3</sup> What transpired was a sustained campaign by scientists, academia, journalists, and environmental activists to stop the project, culminating in the central government’s announcement that the project would be suspended.

The China Resources Power (CRP) Haifeng Power Plant project is a key project in China’s 12<sup>th</sup> Five Year Plan. The total planned capacity for the power plant is 4x1000MW+4x1000MW. Phase 1 (Units 1 and 2 - 2x1000MW) has recently been completed and it is planned that Phase 2 (Units 3 and 4 - 2x1000MW) will include a CO<sub>2</sub> capture facility.

In China, all new-build coal-fired power stations, including the CRP Haifeng project, must undergo an Environmental Impact Assessment (EIA) process, which includes four public consultations, as well as a public hearing. The Municipal Department of Land and Resources also requires a public consultation process for land usage. The EIA-based public participation process is currently “the only official means available for the public to voice its concerns at the project level”.<sup>4</sup> However, public participation in infrastructure and construction projects is growing and becoming more influential in decision-making processes.<sup>5</sup> Recognising this, the CRP Power Project, in collaboration with the UK-China (Guangdong)

<sup>1</sup>[http://www.afr.com/p/national/work\\_space/in\\_china\\_mega\\_infrastructure\\_projects\\_l62GGphlbtJG6QTAXnVSO](http://www.afr.com/p/national/work_space/in_china_mega_infrastructure_projects_l62GGphlbtJG6QTAXnVSO)

<sup>2</sup> Sun, Y. (2015). Facilitating generation of local knowledge using a collaborative initiator: A NIMBY case in Guangzhou, China. *Habitat International* 46, 130.

<sup>3</sup> Huang, Y., Ning, Y., Zhang, T., Fei, Y., 2015. Public acceptance of waste incineration power plants in China: Comparative case studies. *Habitat International* 47, 11-19.

<sup>4</sup> Li, T.H.Y, Ng, S.T., & Skitmore, M. (2012). Public participation in infrastructure and construction projects in China: From an EIA-based to a whole-cycle process. *Habitat International*, 36. 47.

<sup>5</sup> Li, T.H.Y, Ng, S.T., & Skitmore, M. (2012). Public participation in infrastructure and construction projects in China: From an EIA-based to a whole-cycle process. *Habitat International*, 36. 47.



CCUS Centre has committed to a public engagement process that extends beyond the formal EIA requirements. The project acknowledges the need for a deeper engagement with the public to ensure that the communities and key stakeholders surrounding the project have the opportunity to understand the project's objectives, reducing the risk of public opposition to the CCUS component of the project due to misunderstanding or misperception.

## The Guangdong CCUS Demonstration Program

Early CCS projects have documented significant gains in the timely development of CCS public engagement best practices.<sup>6</sup> As a result, the UK-China (Guangdong) CCUS Centre has placed a great deal of importance on including a public engagement strategy as a core part of its development plan. To facilitate the creation of this strategy the Centre is working with leading Chinese science journalist, Ms. Yamin Lin from Nanfang Media Group, to help communicate and engage with the broader community in the Guangdong province. Important elements of this work include thinking about the role of different stakeholders and how CCS public engagement best practice can be applied to Chinese CCS projects.

The UK-China (Guangdong) CCUS Centre was established with support from the NDRC, the Guangdong Development and Reform Commission, the UK Foreign and Commonwealth Office, the UK Department of Energy and Climate Change and the Scottish Government. The Centre is a non-profit organisation, which aims to boost industrial development and academic cooperation in CCUS, and other near zero emission technologies to mitigate greenhouse gas emissions to combat climate change.

The CRP Haifeng Power Plant is located in Xiaomo Town (population 13,000) in the Haifeng County (population 746,000). Xiaomo Town is located on the west end of Shanwei City, on the east coast of the Guangdong province. The town covers an area of 34.45 km<sup>2</sup> including 17 villages. Of the 13,000 population, 49.6 per cent are farmers and 26.9 per cent are fishermen. The town also accommodates approximately 1,000 Hong Kong, Taiwan, Macau and overseas Chinese people.

As the largest company in Haifeng, CRP has established and maintained close links with the local public in Xiaomo Town. For example, CRP has helped improve roads, donated stationery for local schools and helped improve local school facilities, as well as set up financial grants to support the tertiary study of local children.

## Developing the public engagement strategy for the CRP Power Project

There is already an impressive body of international research into public understanding and acceptance of CCS technology. The research highlights that the more highly populated a community is, the more challenging it will be to facilitate understanding and acceptance of new infrastructure and technology – making it increasingly important to conduct the appropriate due diligence around stakeholder identification and understanding the needs and concerns of impacted communities at the earliest stages of project planning.<sup>7</sup>

To date, the majority of CCS project case studies review engagement practices that have been undertaken in low to moderately populated farming or industrial areas. Thus the emerging collection of Chinese CCS projects in highly populated residential areas is proving to be an important area for

<sup>6</sup> Global CCS Institute 2013, *The Global Status of CCS: 2013*, Melbourne, Australia, 138.

<sup>7</sup> Bradbury, J., Ray, I., Peterson, T., Wade, S., Wong-Parodi, G. and Feldpausch, A. (2009). The Role of Social Factors in Shaping Public Perceptions of CCS: Results of Multi-State Focus Group Interviews in the U.S. *Energy Procedia*, 1(1), 4665-4672



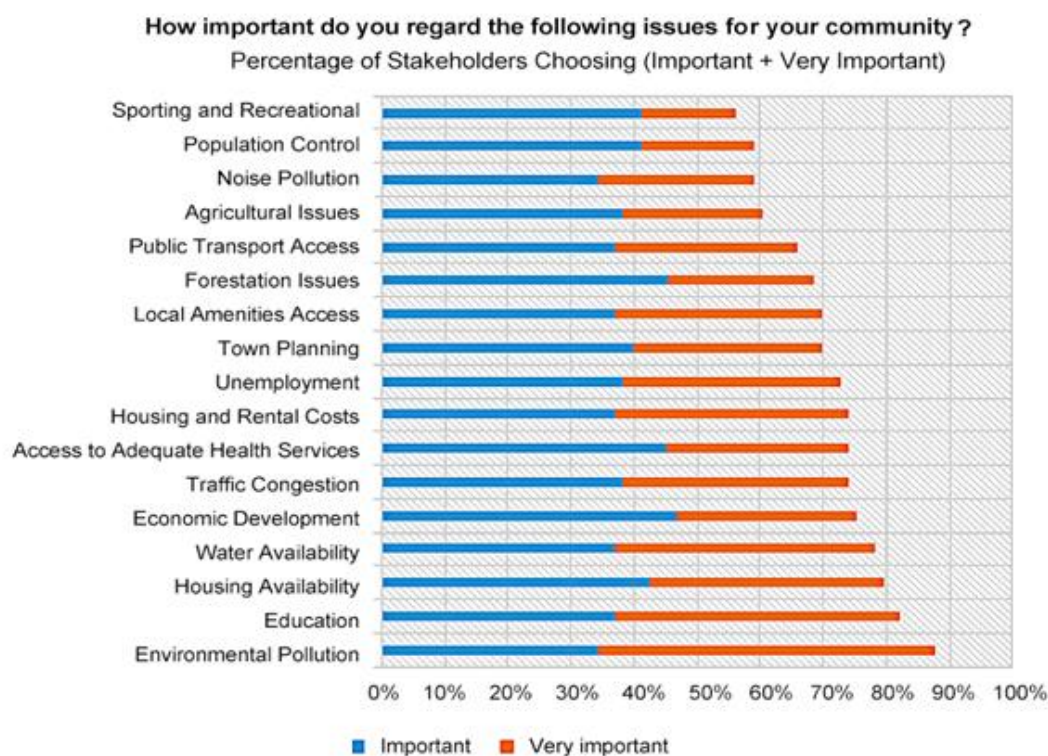


international collaborative research around public understanding and acceptance of projects.<sup>8</sup> To ascertain current understanding and attitudes towards CCUS across the Guangdong province the UK-China (Guangdong) CCUS Centre and partners undertook a study to identify public opinions.

### Key findings of the baseline survey

Using the Global CCS Institute's [Communication and Engagement Toolkit](#)<sup>9</sup> as a guide, the baseline questionnaire was revised to fit the Guangdong and CRP Power Project context. Focusing on the environment, climate change and energy technologies, including CCUS, the questionnaire was completed by 2,410 participants in August 2014. Of the total, 5.5 per cent of participants were from the Haifeng County, Shanwei; 6.9 per cent were from other areas of Shanwei; 1.4 per cent from Huizhou, while 71.3 per cent were from other cities in Guangdong and 15 per cent came from other provinces.

When asked to rate the priority issues for local community, more than 87 per cent of public stakeholders ranked environment pollution as either important or very important.



**Figure 1: Ranking of priority issues**

This was followed by education (82 per cent), housing availability (79 per cent), water availability (78 per cent) and economic development (75 per cent).

In regard to the perceived reliability of information sources, academic papers, newspapers and books were selected as the three most trusted sources. The internet and social media were selected as the least trusted sources.

<sup>8</sup> Global CCS Institute 2014, *The Global Status of CCS: 2014*, Melbourne, Australia, 146.

<sup>9</sup> <http://www.globalccsinstitute.com/publications/communication-and-engagement-toolkit-ccs-projects>

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When asked if they had heard of CCUS, 34.3 per cent responded positively, meaning that two thirds of respondents had never heard of CCUS before. In contrast, research from Ashworth and colleagues shows that people from developed countries have higher awareness, with 84 per cent in the Netherlands, 77 per cent in Australia, 61 per cent in Canada and 36 per cent in Scotland aware of CCS technology.<sup>10</sup> When asked if they would support the concept of a CCUS project, 58.9 per cent said they would support such a project with 10.9 per cent showing strong support. Additionally more than 50 per cent said they would be interested in attending a workshop to learn more about CCUS.

The results suggest that there are opportunities for journalists, academics, other experts, and enterprises to engage with the public through education activities that encourages greater understanding of the role that CCUS might play in China's future energy supply.

## The role of media in CCS public communication in China

The Global CCS Institute and the British Consulate General to Guangzhou (BCG) supported a media communication workshop that was hosted by the UK-China (Guangdong) CCUS Centre, School of Journalism and Communication, Jinan University and Nanfang Media Research Institute in Guangzhou, China on the 11 December 2014.

The purpose of the workshop was threefold. First, to bring together a range of key stakeholders with an interest in CCUS, including project developers, members of the Chinese journalism community and local and international public engagement experts and researchers, to share their experiences and lessons of public communication for energy infrastructure projects in China. Second, to better understand the increasing importance of the public in terms of shaping government policy and shortlisting projects in China, and finally, to identify the best methods for communicating with the Chinese public on CO<sub>2</sub> emission reductions and CCUS technologies, with a particular focus on the media. A number of presentations were provided on the topic, followed by a facilitated discussion between presenters and participants. Throughout the presentations and following discussions, three main issues were raised that are useful to explore to better understand the role of media with regard to CCS projects in China.

*Journalism is playing a more important role for CCUS. The media needs to be engaged in all natural and environmental projects, which create a storm of media coverage because when we talk about a certain large scale project with potential environmental impact, public perception and opinion will be of great influence for the project and government.*

Prof Yijin FAN

Dean of the School of Journalism and Communication  
Jinan University

## The role of the internet and social media in China

It was recognised that in recent years, an increasing number of large infrastructure projects have been delayed, postponed or cancelled due to negative public opinion in China. There was a general consensus amongst workshop participants that communicating with project stakeholders, including local communities, is critical, and that the media have a strong influence on the opinions of this wider 'public' group.

<sup>10</sup> Ashworth, P. et al., 2013. Public Preferences to CCS: How does it Change Across Countries? *Energy Procedia*, 37, pp.7410–7418. Available at: <http://linkinghub.elsevier.com/retrieve/pii/S1876610213009260>.





For many years, print media had been almost the sole information source for many Chinese people. However, with the advent of more open access to the Internet in China, Wikipedia and Baidupedia were thought to be having an increasing role in informing the public about new projects. Although this was seen as an important and helpful development, participants still recognised the importance of newspapers and website content developers to work in collaboration rather than opposition in order to not confuse people. For example, internet searches for technologies that are new or perceived as risky can lead to misinformation, resulting in a negative impact on overall attitudes and opinions about a technology, particularly if the technology is not well understood. One participant felt that it was essential that there was some coordination between newspapers and other forms of new media on the Internet in order to not confuse the public.

*Wikipedia and Baidupedia become the general source of knowledge for the public. Therefore, we should provide detailed information on these websites to popularise the technology and avoid the spreading of false information.*

Teacher, Jinan University

This sharp rise in the number of *Wikipedia and Baidupedia* users across China was also acknowledged by one leading Chinese academic who felt that the onset of the Internet in China was producing a number of ever changing opinion leaders through bottom-up empowerment. Such a situation can make it difficult for government and industry to be fully across what the public is saying and their opinions.

*Social media has become an important portal for people to exchange their opinions; it is a bottom-up channel for changing opinions. Because of the popularisation of smart phones, nearly 700 million people in China express their opinions freely on the Internet. And these "Netizens" are especially active when their interests are closely related to a public event.*

Workshop participant, China

During the workshop, there was much discussion around how much the government would allow 'heroes' to emerge through Internet use. Regardless, it was noted that the public has much greater choice in the way they acquire information. One Chinese academic posited that most Chinese citizens now get their news through SMS rather than the conventional services. Regardless of where they prefer to access their information, the role of face-to-face communication and hands on experiences were still seen as important methods for educating the public about CCUS and building trust in a project.

*The public has been transformed from a passive to positive mode in terms of searching for and acquiring information. It is difficult to find an answer as to which is the most reliable source of information.*

Workshop participant, China

## Information Transparency

Transparency was identified as an important concept for gaining public confidence and trust in new technologies. As in other countries, it was recognised that there was a need to inform the public about all the factors (both positive and negative) that may influence their attitudes towards CCUS. These included outlining any potential damage from CO<sub>2</sub> leakage and negative impacts of construction, but also the benefits associated with CCUS technology.

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Experts and citizens with personal standing were also seen as important conduits of information for the public. It was recognised that the level of impact on personal interests would determine the degree of public pressure that arose towards a project.

## Building Trust

The CRP Power Project representative was clear on the need for trust to exist between project developers, the public, and the Government. He suggested that a positive relationship between the three stakeholder groups was not only vitally important to guarantee the smooth implementation of major infrastructure projects but would also engender community trust in the project. However, there were some concerns that when residents became interested in a project, they would actively seek large sums of money by way of compensation to induce them to sign the documents required to demonstrate public approval of the project.

Another social research expert noted that there is currently a low level of public involvement and engagement in the execution of certain projects. However, their research suggests that many of the Chinese people consider that their participation in projects will not make a big difference, because they feel the government and industry have strong pre-existing relationships which prioritise industries' needs over the public's needs. As such, it was suggested that it was important to establish ways that the public could be proactively brought into such relationships to open them up to a three-way public-government-industry initiative.

*The different interests of business, government and the public need to be coordinated. In some projects like paraxylene projects, real estate developers will do all sorts of things to advance their own interests.*

Workshop participant, China

A leading communications researcher suggested that there were three important variables that affect the public's trust in projects:

1. Interest, including benefits and compensation, and the perceived fairness associated with these elements;
2. Community participation and the evidence of the impact of participation; and
3. Regulation from the government.

The researcher outlined the results of a comparative study on attitudes towards mining in China<sup>11</sup> that had been carried out on these variables, where it was found that a profit-sharing arrangement is the most important factor in China for gaining support for a project. This was in contrast with other countries where all three factors appeared to have some influence.

Finally, the role of a third party advocate to communicate about a project was also suggested as a useful way of building trust. However, identifying who that third party person might be caused some debate.

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<sup>11</sup> Zhang, A., Moffat, K., Boughen, N., Wang, J., Cui, L., & Dai, Y. Chinese attitudes toward mining: Citizen survey – 2014 Results. CSIRO, Australia. EP 151270.



Some workshop participants suggested that the public ultimately look to the Government for information in the absence of any other credible source of information besides their friends and family.

*When confronted with specific issues, the public still prefers to trust the Government.*

Workshop participant, China

## Concluding Remarks

Public support or opposition for new infrastructure projects in China is becoming an increasingly influential factor on whether or not projects are built. This is recognised by the CRP Power Project and the UK-China (Guangdong) CCUS Centre who are actively exploring how CCS public engagement best practice applies in the local context. To date, there has been a strong emphasis on understanding who the stakeholders are and what their needs and issues may be. There was a general consensus at the workshop that a public communication strategy will be critical to the ongoing development of CCUS demonstration in China.

To do this successfully, any strategy will need to build on existing models, including those utilised by other international CCS projects as well as other sectors. Critical considerations include:

1. Addressing the needs and interests of key stakeholders (those impacted by, and/ or with influence on a project).
2. Finding appropriate communication tools in addition to print media, which may include online avenues and more proactive use of social media.
3. Ensuring that project proponents, including government and industry, act in a transparent manner that includes providing accessible and factual information.
4. Exerting additional efforts and creating awareness raising/ educational opportunities, in order to build positive relationships and trust between stakeholders and project developers.
5. Identifying key communication messages which should be consistent across all parties involved in a project. Messages may include:
  - Project goals
  - Addressing misconceptions associated with CO<sub>2</sub>
  - The role that CCUS technologies can play in addressing climate change
  - Economic and social benefits associated with the project.

The following section, Part 2 reflects on how the Global CCS Institute's Communication and Engagement Toolkit can be adapted to support the development of a CCUS public engagement strategy for the CRP Power Project in Guangdong.



## Part 2: Application of the Global CCS Institute’s Communication and Engagement Toolkit in the Chinese Context

### Background

This section examines the Global CCS Institute’s Communication and Engagement Toolkit<sup>12</sup> (the Toolkit) and its suitability for application within the Chinese context, making specific reference to the CRP Power Project. Drawing on the experiences of the CRP Power Project, recommendations have been made throughout this section that may assist the development of future public engagement strategies for CCS projects in China. The discussion does not include all elements of the Toolkit as the development of CRP Power Project public engagement strategy is an ongoing process.

The Toolkit was designed as a universal guide for CCS projects developers and is a practical tool for designing communication and outreach activities associated with a CCS project. It is worth noting that as the China Resources Power (CRP) Haifeng is in the early stages of planning and investigating the potential for CCUS, some of the activities (see Table 1) proposed in the Toolkit, although suitable for the project, have not been applied yet and the comments relating to these activities are based on the authors’ opinions rather than evidence from the field.

A key goal of the UK-China (Guangdong) CCUS Centre is to promote public engagement best practice and to involve the local community in the project, hence the Toolkit has been a helpful tool for informing the early communication and engagement considerations of the project.

Suggested activities	Undertaken
Gathering social data	√
Baseline survey	√
Forming an independent steering committee	√
Citizen task force/advisory board	
Community liaison officer	
Stakeholder identification	√
SWOT analysis	
Establishing a communication and engagement plan	
Education	√

**Table 1:** Communication and Engagement Toolkit: list of suggested activities required to develop a CCS project communication and engagement strategy.

<sup>12</sup> Global CCS Institute, Commonwealth Scientific and Industrial Research Organisation (CSIRO) 2011, *Communication/Engagement Toolkit for CCS Projects*, Canberra

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## Gathering Social Data

The aim of gathering social data is to learn and understand the consequences of a proposed CCS project on the population and local community. Examples of social data categories include; demographics, political trends, job growth and unemployment, local experience with industry, history between community and developers/regulators, local advocacy groups, as well as authority structures. Gathering social data helps the project developers to learn and understand about potential consequences of the proposed CCS project on the local population and wider community.

During the early development of the CRP Power Project, the National Government and the Guangdong Provincial Government provided substantial input into the power station location, taking into consideration opportunities such as employment and economic growth that the project would bring to Xiaomo.

To date the CRP Power Project has not gathered social data as input into the public engagement strategy. Information on the social data categories identified in the Toolkit are not readily available to project developers in China. This is partly due to the way national, regional and local governments interact with one another, which is different to much of the existing documented public engagement literature. However, the proactive approach of the CRP Power Project Management Team has meant they have engaged with a number of key representatives from the local area to develop an intricate knowledge of the social context and local community. The proposed stakeholder groups identified in the Toolkit act as a good foundation for developing a social data collection plan for the CRP Power Project. However, it may be worthwhile to amend some of the social data categories that will be investigated. This will align the Toolkit more closely with Chinese governance approaches. For example, in China, hierarchies of stakeholder influence may differ from authority structures that exist in other communities.

## Baseline survey

Baseline surveys collect information from individuals within the local community regarding knowledge, opinions and attitudes towards climate change, CCS and other energy technologies. The survey acts as an accompaniment to the social data collection process and provides insight into the opinions of the community and potential issues in relation to the CCS project.

As mentioned in Part 1, the CRP Power Project undertook an internet baseline survey around the Guangdong province. The skeleton questionnaire from the Toolkit provided the basis of the questionnaire. CCS is not a well-known technology in China, therefore, Nanfang media released a number of opinion pieces prior to the implementation of the survey. These were helpful in building knowledge and awareness of CCS in the lead up to the activity.

The survey provided some interesting information about public attitudes, however, on reflection, it may have been useful to include one or two open-ended questions to gather more detailed information in the local participants' language. Open ended questions allow survey participants the opportunity to raise issues and concerns that may be relevant to the exercise but haven't been covered in the questionnaire. This would have engendered a result that was more complete in assessing views and opinions of the public.

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## Recommendations:

Drawing on the experiences of the CRP Power Project, these six recommendations may assist the development of future public engagement strategies for CCS projects in China.

- R1.** When developing a baseline survey, take the opportunity to include open-ended questions, as well as those which focus on the specific local communities involved with the project.
- R2.** Consider the development of a database that provides examples of pre-existing survey measures (eg survey questions). Such database can be useful for other CCS projects.
- R3.** Ensure that materials developed for the baseline survey are easily accessible by members of the CCS community. These materials may include media clippings, blog posts, survey questionnaires and analysis.

## Forming an Independent Steering Committee Group (ISCG)

Trust has been identified as a critical component for any CCS project to be accepted by a community. However it is not always easy to build trust if a project proponent is seen to have a vested interest in the project. One way to assist and overcome the issue of building trust is to establish an ISCG early in the life of the project which can be used to oversee the communications of the overall project plan. The Toolkit recommends including the following representatives:

- Independent Chair
- Project representative
- Technical experts
- Government representative
- Communications expert
- Environmental non-government organisation representative
- Community Liaison Officer (see below)

This Toolkit activity has been implemented to a certain degree. The UK-China (Guangdong) CCUS Centre has formally engaged a range of international experts to act as independent advisers to the project. Of these advisers there are some that have expertise in communications/engagement and are representatives from leading Chinese and international media, industry and academia sectors.

Almost all of the Toolkit's recommended representatives have been included in the CRP Power Project's advisory group, however, the Community Liaison Officer post may be required to be somewhat different based on established practices in China (discussed in more detail below). It is worth noting that because this is an international panel it requires a number of resources to coordinate and bring the group together. This has proven challenging as it is early in the project lifecycle and funds are limited for operational activities.

Despite the CRP Power Project recognising community engagement as a priority, as is the development of the public engagement strategy there are practical and financial reasons why the Project has chosen to take a slow, phased approach.

## Citizen Task Force

The goal of a Citizen Task Force is to increase awareness and understanding of a proposed CCS project and to facilitate ongoing communication and effective working relationships between project staff and the community.

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There has been a series of engagement activities with key local leaders in Xiaomo. However, no specific citizen task force has been recruited for this project and formalising such a group is not a priority for the CRP Power Project or the UK-China (Guangdong) CCUS Centre. However, it could possibly become more important as the project progresses as a way of liaising more proactively with the community.

### Recommendation:

**R4.** Establishing a Citizen Task Force may not yet be an effective public engagement mechanism in China due to the traditional roles local communities have had in the development of infrastructure. However, it has been noted throughout this report that the importance of engaging with local communities is increasingly recognised as an important part of the development of Chinese infrastructure projects. Therefore, the relevance of this Toolkit activity to CCS projects in China will need to be monitored and updated.

### Establishing a Community Liaison Officer (CLO)

A CLO provides a link between the local community and project developers. The ideal CLO has a solid understanding of the specific project, can answer technical questions in an accessible manner and communicates effectively across stakeholder groups. Ideally, a CLO is a well-respected member of the community<sup>13</sup> (for example a teacher). The Toolkit advises that a CLO takes on the following responsibilities:

- Fostering an environment that supports community involvement and ownership.
- Providing community members with opportunities to express their concerns and raise issues with experts.
- Establishing and maintaining an effective relationship between the local community and the project developers.
- Building community spirit around the project.

The CRP Power Project and UK-China (Guangdong) CCUS Centre have established a strong relationship with the Mayor of Xiaomo who has an excellent understanding of the local community and has the skills required for building respectful relationships with community members. He has been helpful in advising key stakeholders and willingly engages with ISCG representatives when they visit the town or power station.

There may be merit in considering an alternative representative who does not hold a formal position in the town and has a different relationship with the community. Such a position would have to be carefully managed.

At this stage no formal position has been advertised, but it is being considered how best to adapt the duties of this role to the Chinese context and potentially still boost local employment opportunities.

<sup>13</sup> Global CCS Institute, Commonwealth Scientific and Industrial Research Organisation (CSIRO) 2011, *Communication/Engagement Toolkit for CCS Projects*, Canberra 24.

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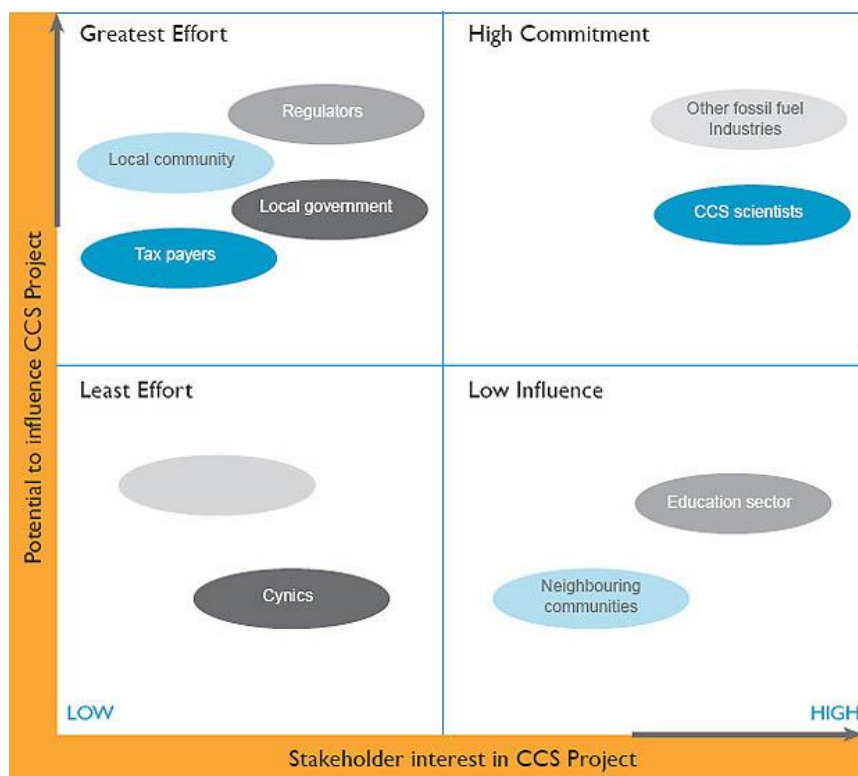
## Stakeholder Identification and Analysis

Stakeholders are:

...those who have an interest in a particular decision, either as individuals or representatives of a group. This includes people who influence a decision, or can influence it, as well as those affected by it.<sup>14</sup>

The stakeholder identification process recommended in the Toolkit assesses the attitudes of stakeholders toward the proposed project. Analysing these attitudes will help determine the level of interest and influence these stakeholders will have. Stakeholders' attitudes may change over the duration of a project so it is crucial to monitor these attitudes.

The CRP Power Project has highlighted stakeholder management as a crucial element to the overall strategy and key stakeholders have been identified. Whilst these stakeholder categories are yet to be documented in the public engagement strategy (as advised by the Toolkit) the project team is well aware of who the influential stakeholders are from across government, industry and academia. Due to limited resources, much of the engagement activities for the UK-China (Guangdong) CCUS Centre has focused on those influential stakeholders critical to technical outputs. Now that the CRP Power Station is operational, stakeholder analysis is a priority activity. The analysis will be done using the stakeholder identification matrix tool available in the Toolkit (Figure 2).



**Figure 2: Stakeholder Identification Matrix<sup>15</sup>**

<sup>14</sup> Hemmati (2002). Multi-Stakeholder Processes - Beyond Deadlock and Conflict. London: Earthscan, 2.

<sup>15</sup> Global CCS Institute, Commonwealth Scientific and Industrial Research Organisation (CSIRO) 2011,



## Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis

A SWOT analysis involves identifying the strengths, weaknesses, opportunities and threats of each of stakeholders.

A formal SWOT analysis has not been undertaken at this stage. There are plans to do so at a later stage of the project's development.

## Establishing a Communication and Engagement Plan

From the stakeholder mapping and identification process a communication plan can be developed. The process requires project teams to identify the most appropriate engagement methods for each individual stakeholder. The range of stakeholders will be broad and diverse and therefore will require the team employ a combination of engagement processes that are both formal and informal. The social data collection and baseline survey analyses are integral information for the development of engagement activities. The types of engagement activities that could be employed include:

- Briefings and presentations
- Public Displays
- Public Meetings
- Newsletters
- Websites
- Workshops and focus groups
- Open days and site visits
- Social networking
- Media releases

A rough draft of proposed activities has been developed in conjunction with the ISCG. However the plan has not been finalised or implemented in a concerted way due to the lack of dedicated resources. That being said there have been a number of activities such as the baseline survey, workshop and this report that have proven helpful in analysing and documenting the community's knowledge and understanding of CCS.

## School Education

School Education is an important and prized component of Chinese life. It is also a way of engaging with the parents and families of children on learning and educational topics. The Toolkit emphasises the importance of education and suggests a number of resources that would be useful to draw upon.

In December, 2014 seven public engagement experts from Australia, America and the UK visited two schools in Xiaomo to demonstrate science lessons based on the Institute's CO2degrees material<sup>16</sup>. CO2degrees provides free CCS educational resources for students learning about energy, CO<sub>2</sub>, climate change and low-carbon technologies.

The Mayor of Xiaomo is supportive of any additional educational activities that can be undertaken with the schools in the region. The Mayor commented on the importance of the activities and opportunities to continue these activities with the broader community.

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*Communication/Engagement Toolkit for CCS Projects, Canberra*

<sup>16</sup> <http://co2degrees.com/learn-more/overview>

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*As the smallest town in Haifeng County, Xiaomo is honored to be the location of the China Resources Power Plant. But at the same time, people in Xiaomo, which has the best natural environment in Haifeng, mainly live on fishing as well as breeding shrimps and crabs, so they care particularly about environmental changes. Acting responsibly for the people in Xiaomo, the China Resources Power Plant spent an extra 200 million yuan to install environmental protection equipment, which shows their sincerity. However, the communication work cannot be done all at once, and more work needs to be done especially once the plant is operational. I suggest that people should, group by group, be invited to visit the plant, particularly to view the operation of the environmental protection equipment. For example, fishermen may care about its effects on quality of water, thus it is necessary to invite them to see the quality of the water treatment. People generally care for air quality, so they can be invited to look at air purification. In order not to disrupt electricity production, the plant can set aside a specific day to popularize science, to explain how electricity is generated and the theory of environmental protection and its status. At the same time related questions could be answered through the creation of a center for science popularization so that everyone can actually be reassured.*

Mayor Meichun TAN  
Xiaomo

More recently, the Institute's educational materials have been used by the UK-China (Guangdong) CCUS Centre to deliver information to more schools across the region and there is potential for future educational collaboration. According to the Deputy Secretary of the CRP Haifeng Power Plant project, the Guangdong Department of Education is very supportive of including a focus on the environment and energy in their ongoing curriculum. There is the possibility of working with them to adapt the CO2degrees materials and incorporate it into a formal education program.

## Recommendations:

- R5.** Education has been identified as a key influencing factor in China. Projects should consider including an education program as part of a project's public and communication strategy. This should be done through engagement with the appropriate government departments.
- R6.** Seek opportunities to educate the wider community on CCS. This can be done through open days and site visits to specific projects. The engagement should include discussions on how potential environmental impacts of projects will be managed.

## Next steps

This is the first time the Toolkit has been formally applied in a Chinese context, however, given the early stage of development of the CRP Power Project it is too early to draw a full set of conclusions about the applicability of the Toolkit in the Chinese context.

To date, the Toolkit resource has provided a solid framework for the CRP Power Project to scope its own public engagement strategy and there is definitely potential to implement further elements of the Toolkit.

The CRP Power Project team has expressed an interest in dedicating a few days with a small group from the Centre and the ISCG to develop a complete public engagement strategy for the project. Once in place this could be formally implemented, monitored and adapted as the project progresses and would provide valuable insights into best practice methods of communication and engagement on the topic of CCS/CCUS in China.

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Additionally the CRP Power Project, UK-China (Guangdong) CCUS Centre and regional education authorities are seeking support to implement further education activities across Guangdong.

The key recommendations from this early application on the Global CCS Institute's Communication and Engagement Toolkit in the Chinese context are summarised below. The recommendations have been developed for consideration by CCS projects in China based on the experiences of the CRP Power Project and UK-China (Guangdong) CCUS Centre.

- R1.** When developing a baseline survey, take the opportunity to include open-ended questions as well as those which focus on the specific local communities involved with the project.
- R2.** Consider the development of a database that provides examples of pre-existing survey measures (eg survey questions). Such a database can be useful for other CCS projects.
- R3.** Ensure that materials developed for the baseline survey are easily accessible by members of the CCS community. These materials may include media clippings, blog posts, survey questionnaires and analysis.
- R4.** Establishing a Citizen Task Force may not yet be an effective public engagement mechanism in China due to the traditional roles local communities have had in the development of infrastructure. However, it has been noted throughout this report that the importance of engaging with local communities is increasingly recognised as an important part of the development of Chinese infrastructure projects. Therefore, the relevance of this Toolkit activity to CCS projects in China will need to be monitored and updated.
- R5.** Education has been identified as a key influencing factor in China - consider including an education program as part of a project's public and communication strategy. This should be done through engagement with the appropriate government departments.
- R6.** Seek opportunities to educate the wider community on CCS. This can be done through open days and site visits to specific projects. The engagement should include discussions on how potential environmental impacts of projects will be managed.

## Conclusion

The CRP Power Project is a leading example of how a CCS project in China is undertaking the development of a communication and engagement plan. The lessons that have emerged, and will continue to emerge out of this process will be useful for other Chinese CCS projects.

This report provides an overview of the development process of a public engagement strategy for the CRP Power Project and the UK-China (Guangdong) CCUS Centre. Part 1 focused on the role of the media as a key influencer in China, while Part 2 expanded on the application and appropriateness of the Global CCS Institute's Communication/Engagement Toolkit for CCS projects in China drawing on the experience of the CRP Power Project and the UK-China (Guangdong) CCUS Centre. It is clear from the analyses of both sections that public communication and engagement on large infrastructure projects is increasingly a priority within the Chinese context, particularly as projects are being held more accountable by the broader public and communities impacted by projects.

Although the CRP Power Project is currently focused on other components of the CCUS project, communication and engagement remains a priority. There has been active and ongoing engagement with influential stakeholders at the international, national, regional and local levels. There is potential to engage more proactively with other stakeholders and, as identified by the CRP Power Project, it would be worthwhile hosting a small workshop to fine tune and plan a series of engagement activities.

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