



Australian Government
Austrade



U.S.A. Gulf Coast Reconstruction

Opportunities for Innovative Building Solutions

In excess of 250,000 homes were destroyed in the U.S. Gulf Coast region by Hurricane Katrina. There is great opportunity for innovative Australian housing solutions in this market.

The Gulf Coast

Hurricanes Katrina and Rita struck the U.S. Gulf Coast in September 2005, creating one of the costliest natural disasters in U.S. History. The U.S. Federal Government has appropriated \$200 Billion for economic revitalization, repairs and reconstruction in the region. The funding is controlled by the States and the money is beginning to be spent. There are also business opportunities for Australian companies in a range of industry sectors.

Why the Gulf Coast is an Attractive Market for Australian Companies.

- 250,000+ homes to be rebuilt in the Gulf Coast region
- The U.S. Federal Government has appropriated in excess of \$200 billion to the hurricane effected areas
- There are currently significant economic incentives for businesses which locate in the Gulf Region
- Over the next ten years, more government money will be spent in the Gulf Coast than any other region in the U.S.
- Louisiana and Mississippi were two of the first states to become signatories to the AUSFTA
- There are already many Australian businesses enjoying success in the Gulf Coast Region
- The Gulf Coast has an economy, climate, and business culture similar to that of Australia



Housing Requirements for the Gulf Coast

During Katrina, there were in excess of 200,000 homes destroyed in Louisiana and an estimated 50,000+ homes destroyed in other Gulf Coast States including Mississippi and Alabama. The U.S. Government has identified housing as a priority since it is the key issue impacting on employment shortages in Louisiana, Mississippi and the Gulf States. The US Government has recently appropriated funding which will allow homeowners to apply for up to \$150,000 in financial assistance from the Federal Government to cover losses not covered by insurance.

There is a huge need for both residential and rental properties. It is also recognized that the region and the USA need building and construction solutions regarding elevated and hurricane resistant housing systems. Australia is well known as a leader in these areas and also can offer housing solutions which are affordable, can be built quickly, can provide semi-skilled jobs for local labor, and are mold and termite resistant. All of these factors are keenly sought after in the Gulf.



US Gulf Coast Reconstruction Program Opportunity Brief

This brief is intended for Australian companies interested in entering the United States market and using the opportunities from the Gulf Coast reconstruction program as a springboard. It describes a broad range of activities and opportunities which the reconstruction program will generate and an approximate timeframe over which they will occur. A precise definition and quantification of opportunities is not currently available. During 2007, the scope of work is expected to become clearer and this brief will be updated accordingly as information becomes available.

Background

During the last week of August 2005, Category 5 Hurricane Katrina, devastated large areas of the United States Gulf Coast region and generated a coastal storm surge 20 to 30 feet above normal tide levels. The storm surge overpowered the levee and sea wall systems of New Orleans, which were designed to protect the city, overloaded the network of pipes and pumping stations, and flooded many residential areas with highly contaminated sea water. Some 80% of the city's residential areas were immersed, and whilst the flood waters have been pumped out, the dwellings remain uninhabitable to this day. In addition, thousands of dwellings along the Louisiana and Mississippi coast were blown from their foundations, leaving once densely populated communities barren, with nothing other than concrete slabs remaining.

Less than a month after Hurricane Katrina hit the Gulf Coast, Category 3 hurricane Rita crossed the coast near the Louisiana-Texas border, and added to Katrina's devastation. Katrina and Rita jointly accounted for the loss of some 1500 lives, displaced 780,000 people from their homes, destroyed or damaged beyond repair 250,000 dwellings and eliminated 18,000 businesses.

The destruction caused by Hurricanes Katrina and Rita constitute the biggest natural disaster ever to strike the United States. Vast areas of the coastline of Louisiana and Mississippi have been devastated and the task to rebuild what has been destroyed has been widely described as the biggest construction task in the history of the United States and equivalent in scale to 3-4 Chinese Three Gorges Dam projects.

Whilst the initial task of cleaning up and repairing the damaged levees has been largely completed, the task of re-building has hardly begun.

Opportunities for Australian Companies

Due to the complexities of the US market and high levels of competition, Austrade and ICN recommend a presence in the market as a preferred strategy for long term success. This can be achieved through possible joint venture relationships or channel partnerships with local providers. Australian companies operating in the following sectors have excellent prospects to compete for contracts in the Gulf Coast Reconstruction Program.

- Housing construction (250,000 new dwellings needed and all that goes into them)
- Fast construction, low skill demand, low cost, hurricane and flood resistant construction technology
- Steel fabrication
- Pile driving
- Major civil engineering and building design
- Major civil engineering and building construction
- Fast growing Cypress tree plantations, cultivation and other revegetation
- Wetlands re establishment
- Construction camp establishment
- Environmental engineering and remediation
- Waste disposal
- Coastal engineering
- Imaging
- Project and construction management
- Disaster prediction and response systems
- Communications
- Professionals across all classes



The immediate challenges

Engineering/construction

Of the immediate challenges listed above, the engineering and construction challenges are the most clearly definable and quantifiable and are technically relatively straightforward. However, the scale of the tasks to be undertaken is massive and will require a huge mobilisation of resources from multiple sources. Whilst estimates of the scale and timeframe of the engineering and construction task vary from commentator to commentator, a core consensus of opinion is as follows:

- 250,000 dwellings to be built
- Tens of billions of US\$ in civil engineering works
- 5-10 years of massive construction
- 20 year project (some say up to 30 years)
- US\$120 billion to be spent (some say conservative)

Australian companies with advanced products and services, applicable to large scale residential redevelopment, that are hurricane/cyclone resistant should be able to add value in the housing reconstruction program.

Australian companies with civil engineering project and construction management skills, applicable to large scale civil engineering projects will find a receptive market where demand currently exceeds supply.

Climatic/Environmental

Climatologists warn that even modest rises in sea temperature (.5 degrees Celsius) will result in more severe hurricanes, occurring more often. The Probability of the Gulf Coast being hit by another category 5 hurricane within the next decade is increasing. Therefore the question of what level of hurricane protection can reasonably be provided to the Gulf Coast region needs to be contemplated and answered.

Whilst the levees have been repaired and returned to their category 3 level of protection, discussion and agreement on increasing levee protection to say category 5 is still taking place. In addition, a commitment to restore the 90% denuded wetlands in the Gulf of Mexico, which have provided protection against coastal surges in the past and have been destroyed in recent times by the Gulf's oil industry, needs to be undertaken.

Australian companies with the ability to evaluate levee condition and propose innovative and cost effective means of repair and augmentation to category 5 protection will be well regarded. Australian companies with expertise in rapid restoration of wetlands and coastal engineering expertise will also be well regarded.

The tasks to be undertaken

Substantial portions of the economies and infrastructure of Louisiana, Mississippi and Alabama have been wiped out by the hurricanes of 2005 and development has been set back several decades. Many of the basic social and economic systems of the region have been substantially degraded and the three states need to put in place appropriate mechanisms to compensate the community.

The list of tasks to be undertaken and the items to be procured is far too long and currently too inadequately defined to incorporate into this opportunity brief. However, tenders and work packages are slowly starting to be released by the reconstruction authorities and it is intended that future updates of this brief will list emerging tenders and work packages for Australian companies to respond to. In the meantime, the broad scope of tasks that need to be undertaken should be contemplated.

These tasks include rebuilding some 250,000 dwellings, supported by new underground and above ground infrastructure, replacing schools, churches and medical centres, replacing 18,000 business premises and preparing the Gulf Coast region to survive future category 5 hurricanes. Before the reconstruction task can commence, housing for the constructors has to be provided and construction material supply lines established, following which an army of construction workers needs to be recruited and brought from elsewhere.

In order to support all of this activity, together with supporting the diminished local population, professionals of all types need to be brought to the region to staff the hospitals and schools, to carry out the legal and planning processes and to design and supervise the building work. Almost anything that might be needed, to create and support a community of 250,000 dwellings and its inhabitants, is needed.

In addition, systems that more accurately predict the scale and trajectory of future hurricanes are required together with more effective rapid response systems to protect and rescue the community. The Federal Emergency Management Authority (FEMA), which has a



staff of just 1800 people to cover the entire United States, were unprepared and overwhelmed by what was required of it when Katrina and Rita struck. FEMA needs to identify, procure and deploy world's best practice disaster preparation and response systems.

Case Study:

Force 10 International Pty Ltd is an Australian Company based in Brisbane who design and manufacture cyclone/hurricane proof houses and exports them around the world. Proprietary materials include the Force10 Floor System, Wall System and Roof System. Two representatives of **Force10** visited the Gulf Coast with Austrade Personnel in June 2006. Subsequently, Force10 have forged a link with a Florida based group to manufacture their products in the Gulf under a licence agreement to the Australian owners.

As a first step, **Force10** have provided a 2,500sq foot house with "southern mansion" architecture which has been erected in Biloxi, Mississippi (January 2007). This construction generated enormous interest in the local community (and beyond) and it is anticipated that the Governor of Mississippi State will carry out a formal inspection and opening of this house early in February.

In addition, the USA Partners of **Force10** have reported a large number of potential orders from companies who have inspected this spec house in Biloxi MS. This is an illustration of the diversity of the needs of the Gulf Coast region, and how Australian companies are able to win contracts there based on unique experience and expertise.

The available funding

The US federal and state governments and major international insurers are reported as jointly having committed some US\$120 billion to the Gulf Coast reconstruction program. The State Government of Louisiana has initiated a program of grants to affected home owners called "The Road Home" which will provide a homeowner who has sustained damage to, or loss of a home, a grant of up to US\$150,000 for repair/reconstruction.

The first payments to homeowners under this scheme were reportedly made in August 2006. However, at present these payments will be made on a homeowner by homeowner basis, which might potentially preclude efficient large scale reconstruction of subdivisions. The concept of large scale reconstruction, potentially by developers, who would offer completed homes to the market, is currently under consideration by the reconstruction authorities.

In addition to financial support for homeowners, a range of concessions are being offered to people wishing to establish new businesses in the region. These include 50% depreciation of assets in the first year in some areas and in others the provision of land for industry on extremely generous terms. Specific areas of Louisiana have been designated as the Gulf Opportunity Zone, or GoZone, as defined by damage created by Katrina or Rita or both. Tax-Exempt Bond Financing for business investment, particularly associated with reconstruction, is available in these areas.

Austrade and ICN can help Australian companies looking to establish in the Gulf Coast region understand what potential sources of funding are out there and how to access these both directly and indirectly.

The present status of rehabilitation/reconstruction

Since Katrina and Rita devastated the Gulf Coast region, several billions of US\$ have been spent in dewatering, clearing some 25 million tonnes of debris and repairing the levees, flood walls and flood gates where they failed. Large contracts have been awarded by FEMA to Fluor, Bechtel, Shaw Group and CH2MHill and other large national corporations. In order for reconstruction funds to provide a stimulus to the local economy, a policy of preference towards awarding contracts to smaller local companies is emerging. Australian companies who wish to participate in the reconstruction program will therefore need to be aware of this preference and consider forming joint ventures with local companies. Local companies appear to be receptive to discussing joint ventures with outsiders who can offer skills and products which enhance their capabilities and competitiveness.

Senior executive from Fluor, Shaw Group and CH2MHill, advise that there is a substantial shortage of resources, even within their own companies, to service the demands that the reconstruction program requires. They described themselves as keen to meet with and discuss joint ventures with Australian companies who can provide the skills and resources for which there is an unsatisfied demand.

In summary, the Gulf Coast reconstruction process can be described as yet to commence on a large scale and the major US corporations appear to have insufficient resources available in the region to meet the expected demand. However, the broader US housing market is facing a downturn, which could free up construction resources to deploy in the Gulf Coast region.



Present Status of resources

The flight from the Gulf Coast region of large numbers of professionals and skilled workers has left a gap in skilled human resources, which is disproportionate to the approximately 50% reduction in the general population. An example of this disproportionate gap is the current situation in New Orleans regarding registered psychiatrists, who numbered 192 pre Katrina and today stand at 22. If this ratio of departure is representative of other professions and skills, it describes a very acute shortage of the types of workers who are in greatest demand at present and into the foreseeable future.

Australian companies who can supply the types of professional and skilled workers who are currently in critically short supply will be well regarded.

There is a huge demand for all kinds of building and construction trades and professionals and the concept of importing such people is under discussion. In addition, the trainers of such people are in great demand to staff the local equivalents of Australian TAFE colleges. Australia organisations that can provide construction skills training would be in great demand.

The region devastated by Katrina and Rita has a significant number of homebuilders within it, whose products range from low cost simple designs to large scale custom built mansions. However, their delivery capacity is dwarfed by the need which exists and the technologies to build homes that can resist future hurricanes and floods appear to be in short supply. Australia's experience following cyclones such as Tracy and more recently Larry could be of great value to the Gulf Coast housing requirements.

Present status of supply

A very small number of homeowners, whose homes incurred only minor damage, have tried to commence repair and restoration of their homes. There remain a number of difficulties for homeowners in sourcing such simple materials as bags of cement, plywood and other simple construction materials.

In addition to the chronic shortage of materials, there is also a shortage of tradesmen. Some local companies are importing skilled trade's people from interstate and even from the Caribbean. A company, whether American or foreign which can deliver, deploy and retain the labour and materials in the large quantities required to make a significant impact in the reconstruction program will be very welcome and successful.

The status of the Brand Australia

Louisiana was the first state to sign the Free Trade Agreement with Australia (31 States signed at present) and eagerly encourages Australian companies to establish in the region. A number of iconic Australian companies are already well established in the region including James Hardie, Boral, Tenix, Austal and Woodside Petroleum among others.

Australia is seen as a friendly brand in the Gulf Coast region and the interest shown by a number of Australian companies in participating in the reconstruction program has been received with great warmth and gratitude. It has been suggested that because they are not locals, that Australians might be able to "cut through" in ways and in places where the locals can't.

James Hardie's Hardiplank has been referred to by a number of construction workers and professionals as a very advanced building material which has found great favour; particularly in older neighbourhoods of New Orleans where timber (or faux timber) clad buildings are a key feature of the streetscape.

"Australia has a knack of moving into a confused, poorly supported environment and doing well. Australian companies wishing to work in this area and particularly joint venturing with local firms will be welcomed and gain favour in the government tendering area" says a Senior New Orleans Engineer.

Summary of the opportunities for Australian industry

Australian companies such as James Hardie, Boral and BHP Billiton have achieved outstanding success in the US construction and engineering markets and demonstrate what can be achieved. Their names are well recognised, and the Australian "can do" ethic is well known and respected. The 'Australian Brand' is a valuable asset, particularly at the present time as a result of Australia's support of the US in Iraq and can be capitalised upon.

The Free Trade Agreement between the United States and Australia, and Louisiana's role as the first US state to sign this agreement provides an environment for Australian companies which is more welcoming than ever before.

The available opportunities are as diverse as shrimp farming to levee building and computer training to hydrographical modelling. Almost nothing should be excluded from the needs of the area and Australian technology doesn't necessarily have to be better than the local, it just has to be offered and be available.



CH2MHill, Fluor and Shaw Group all expressed themselves as highly receptive to the concept of meeting innovative, creative potential partners from Australia with whom to discuss teaming. All three of these companies are very large, highly capable, well resourced and geographically diverse, yet need more resources from wherever they can be sourced.

The preference of local authorities to award contracts to local companies in order to stimulate the local economy means that a willingness for Australian companies to enter into teaming or joint venture agreements may be a key requirement.

The Gulf Coast as a springboard to other markets

The New Orleans World trade centre advised that if the five ports of the lower Mississippi were combined as one, the combined entity would represent the largest port in the world. The region is therefore a very significant maritime gateway of great significance. Access by ships to the central United States, the Caribbean and South America is readily available via the Gulf of Mexico and the Mississippi river.

The major cities and towns of Louisiana and Mississippi are centres for the Gulf of Mexico oil and gas industry. In addition, La Fayette is a high tech, nanotechnology, oil and gas, and aerospace centre. The freeway and secondary road system of the Gulf region is advanced and the rail links to other parts of the country are also highly developed and efficient.

Financial incentives provided post Katrina, to encourage the establishment of new businesses in the region, provides a good incentive for Australian industry to consider Louisiana/Mississippi as a place to enter the US market. Coupled with access to other markets and industry segments, the Gulf Coast is attractive to Australian industry.

Next Steps

Austrade and ICN are planning a seminar series around Australia for clients who may be interested in learning more about the scope of opportunities in the Gulf Coast. Please direct your expression of interest for more information on the Gulf Coast Reconstruction program to ICN. Following this seminar series, Austrade and ICN intend to host a mission to the region to further assist Australian companies identify opportunities that are specific to their expertise and identify channel partners to grow business.

The "International Builders Show" will be held in Orlando Florida, 7-10 February 2007. Over 1,800 leading suppliers representing 300 industry categories will be present. This is a great opportunity to learn, plan, connect and help move your business ahead of the rest in the Gulf Coast.

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