



JTC AWARDS S\$ 900,000 TO FUND RESEARCH PROJECTS

Singapore, 29 Nov 2010. JTC Corporation (JTC) today awarded a total grant of \$900,000 to fund three research projects which are aimed at improving the environmental sustainability of its industrial parks. Out of the three projects, two were submitted by the Nanyang Technological University and one by the National University of Singapore.

2. At an agreement signing ceremony held today at The JTC Summit between JTC and the three research teams from the two tertiary institutions, Mr Manohar Khiatani, Chief Executive Officer at JTC, said, “This is part of our efforts to proactively seek new ideas outside of JTC to complement our own ideas and increase our capacity for innovation to sustain Singapore’s competitive edge in industrial infrastructure. We are pleased and encouraged by the quality of the submissions received. JTC plans to conduct this exercise annually.”

3. Nanyang Technological University (NTU) School of Civil and Environmental Engineering submitted a proposal to study the reduction of urban heat by using ground water to cool buildings in industrial parks. The second project by the NTU School of Mechanical & Aerospace Engineering proposed the development of an evaluation tool offering easy-to-use building energy analysis and thermal load simulation to aid the design of energy-efficient buildings.

4. Finally, the National University of Singapore (NUS) Department of Architecture proposed an automatic carbon tool which allows for performance tracking and carbon calculation for buildings and estates, thereby reducing the time and effort needed for carbon assessment in JTC estates. More information on these projects can be found in Annex A.

5. As an industrial infrastructure innovator, JTC places priority on developing innovative and sustainable solutions to meet the evolving needs of industrialists. In March 2010, JTC reached out to external partners for innovative ideas to enhance Singapore's industrial infrastructure. JTC launched the inaugural JTC Innovation Fund, via a Request for Proposal (RFP) inviting ideas which can be developed for intensifying land use and optimising the use of limited natural resources such as land, water and energy for a long-term sustainable environment. The RFP was targeted at institutions of higher learning, private and public sector organizations in Singapore.

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About JTC Corporation

JTC Corporation (JTC) is Singapore's leading industrial infrastructure specialist spearheading the planning, promotion and development of a dynamic industrial landscape.

For more than 40 years, JTC has played a key role in the growth of the economy by providing cutting-edge industrial real estate solutions. Some of its landmark projects include wafer fabrication parks, business parks, Biopolis and Fusionopolis at one-north, a chemicals hub on Jurong Island, biomedical parks as well as logistics hubs for various industries. These industrial and business parks are now home to renowned global companies and promising local enterprises.

Today, JTC continues to break new ground with pioneering projects that anticipate and address the needs of industry. The Jurong Rock Caverns look to subterranean depths to optimise land use; Seletar Aerospace Park and Tukang Innovation Park support the growth of new industry clusters in aerospace and innovation activities; CleanTech Park, Singapore's first eco-business park, offers unique clean technology features and also serves as a 'living lab' for the test-bedding and development of green technologies and sustainable urban solutions; and the Jurong Island Version 2.0 initiative plans to cut carbon emissions and enhance competitiveness of the chemicals hub.

As Singapore transforms itself for the future, JTC will partner with its customers to understand their evolving needs and develop appropriate 'future-ready' infrastructure solutions. The Corporation will continue to expand its innovation capacity and offer infrastructure facilities of a calibre that sets the city state apart as an investment location.

JTC will hence position itself as an industrial infrastructure innovator that creates value for its customers by developing the optimal infrastructure solutions that they aspire. This will help differentiate Singapore and propel it to the next level of growth.

For more information on JTC and its products and services, please visit www.jtc.gov.sg.

For more information, please contact:

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Annex A – Project Details

| S/N | Project Title | Organisation | Principal Investigator / Designation | Project Summary | Benefits |
|-----|--|---|--------------------------------------|---|---|
| 1 | Reducing Urban Heat Within JTC Estates by Installing Subsurface Water Cooling Systems | NTU - School of Civil and Environmental Engineering | Qin Xiaosheng / Assistant Professor | <ul style="list-style-type: none"> • Feasibility study on using ground water for cooling in JTC buildings or estates. • Benefits compared to conventional cooling systems will be studied. | <ul style="list-style-type: none"> • The proposed subsurface water (or other chilled water) cooling system, at building or estate level, could help to reduce energy required for air-conditioning and this could lead to cost savings to JTC and JTC's customers. • A reduction in energy consumption will in turn mitigate the urban heat effect and reduce environment impacts within JTC's estates. |
| 2 | Development of a User-Friendly Evaluation Tool for Design and Analysis of Building Energy Efficiency for Singapore | NTU - School of Mechanical & Aerospace Engineering | Li Hua / Assistant Professor | <ul style="list-style-type: none"> • Available building energy usage evaluation tool will be modified for use in Singapore's climatic conditions. • Proposed tool will be user-friendly and include a recommendation function for the use of various energy saving technologies to enable easy performance evaluations. | <ul style="list-style-type: none"> • Proposed evaluation tool can be used to give a quantitative evaluation of various energy saving technologies to aid building design, which can lead to more energy-efficient buildings. • This translates to lower carbon emissions and cost savings in terms of energy usage for JTC's customers. |

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|-----|--|----------------------------------|--------------------------------------|---|--|
| 3 | Automatic Carbon Tool for Planning and Design of High-Density Industrial Estates | NUS - Department of Architecture | Huang Yi Chun / Assistant Professor | <ul style="list-style-type: none"> Development of a carbon calculation tool which is applicable for all stages of development at both building and estate level. | <ul style="list-style-type: none"> Proposed carbon tool allows for performance tracking and carbon calculation for JTC building and estates. The tool is automated in nature and would reduce time and efforts needed for carbon assessment. |

Total grant amount for the 3 projects is more than \$900,000.