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The Chief Executive Officer
Northern Beaches Council
725 Pittwater Road
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Attention: Mr David Auster, Town Planner

STATEMENT OF ENERGY OBJECTIVES AND METHODOLOGIES
39 CABBAGE TREE ROAD BAYVIEW
DEVELOPMENT APPLICATION FOR RECREATION FACILITY (INDOOR)

Introduction

About one-third of global energy is consumed in residential, public, and commercial buildings, where it is used for space heating, cooling, ventilating, lighting, cooking, water heating, refrigerating, and operating electric and mechanical devices (ESMAP Knowledge Series - 019/14). Global energy use in buildings is expected to grow as cities in developed countries continue to modernise and per capita income levels increase. New commercial buildings offer the opportunity for unparalleled energy savings (ibid).

Objectives

Energy efficiency means avoiding spending money on wasted energy and at the same time freeing up resources for the gym operators in terms of more productive purposes. This will in turn lower the cost of operating the facility, and help the business to grow.

This development seeks to reduce greenhouse gas emissions by the efficient use of energy, and through the use of energy from low emission or renewable sources to the maximum extent possible. Energy efficiency will also be achieved through the use of appropriate materials in construction and from measures designed at insulation and ‘natural’ cooling. Energy efficiency is basically about the ratio of energy inputs to outputs. Minimising inputs for greater outputs, will mean using less energy to perform similar tasks.

Achievement of Objectives

Energy efficiency will be achieved by:

1. Avoiding unnecessary energy use through ‘’passive’’ design eg by “super insulation”;
2. Use of white and other light coloured materials in our warmer climate;
3. Where energy use is unavoidable, using it efficiently; and

4. Where energy is used efficiently, using the least greenhouse intensive forms of energy.

Achieving a Balance

In assessing cost-effective opportunities to increase energy efficiency for the building envelope, a balance in terms of this indicia, fixed appliances and equipment, and on-site renewable energy systems will form part of a detailed impact analysis.

The analysis will form part of the building specification upon approval to the development application. There will also be a focus on ensuring comfort year round for users of the facility, and minimising both heating and cooling loads.

Methods of Achieving the Balance

Engaging Occupants in the Building – The future occupants will be engaged in the process of improvement to energy efficiency and encouraged to embrace energy efficient solutions.

Energy-Efficient Bulbs & Lighting Fixtures – Use of appropriatye lighting fixtures will be a key requirement for the building. Incandescent light bulbs will not be used in this project. Energy-saving LED bulbs will be provided throughout the structure both internally and externally.

Light Sensors – Lighting control mechanisms will be provided. Light sensors are relatively cheap and highly reliable in controlling lighting and minimizing wastage.

Protection of the Building from Sunlight – The orientation of the building has taken this most significant issue into account. The use of the existing and augmented tree canopy will assist in this regard. To keep temperatures low, direct sunshine from windows will be minimised by appropriate coverings and protection devices. Insulating climate-controlled areas of the building will be provided through solar films, solar screens, and awnings. Leaks around doors and windows will be avoided so as to control internal conditions.

Heating with Thermostats – Costs will be kept in check and increased energy efficiency will be achieved by installation and use of thermostats.

Air Conditioning Systems – Fans to aerate and cool rooms will be used. Minimisation of air conditioning hours and use of programmable thermostats when heating, will help to achieve this goal.

Energy-Star Qualified Products – Products with manufacturers' energy efficient ratings will be used. Models with Energy star labels using less energy than conventional products, will be specified.

Conclusion

We would be pleased to discuss this further and we invite the Council to impose suitable conditions to achieve the objective of provision of an energy efficient facility. Should you have any questions, please contact me on the number above.

Yours faithfully,
TURNBULL PLANNING INTERNATIONAL PTY LIMITED

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