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MAXIMISING PETROLEUM POTENTIAL

SUBMISSION TO THE MINISTRY OF ECONOMIC DEVELOPMENT

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BACKGROUND

The Institution of Professional Engineers New Zealand (IPENZ) is the lead national professional body representing the engineering profession in New Zealand. It has approximately 11,500 Members, including a cross-section from engineering students, to practising engineers, to senior Members in positions of responsibility in business. IPENZ is non-aligned and seeks to contribute to the community in matters of national interest giving a learned view on important issues, independent of any commercial interest.

IPENZ has consulted with the New Zealand section of the Society of Petroleum Engineers (SPE NZ) in compiling this submission. SPE NZ is the professional body for this country's petroleum engineers, many of whom have engineering degree qualifications from New Zealand universities in disciplines such as chemical and process, civil and mechanical. The IPENZ/SPE NZ relationship is therefore a very natural one. SPE NZ has 90 members plus a growing engineering student membership at the University of Auckland, where a student chapter was launched in October last year.

IPENZ has also liaised with the Petroleum Skills Association, the Petroleum Exploration and Production Association of New Zealand, and the Centre for Advanced Engineering New Zealand in the preparation of this submission.

EXECUTIVE SUMMARY

The development of New Zealand's petroleum resources has the potential to significantly lift our economic performance. Competing in a global context for capital and people will require significant government leadership.

Other key government roles to play are the provision of geoscientific data, better co-ordination across government, more engagement with industry, improved permitting processes and a review of legislation. These initiatives will require additional resourcing.

IPENZ believes that there are significant shortcomings in the training and education of people for this industry, and this is in the context of an overall engineering skill shortage. Education and skills should be an additional action in this Action Plan to align with the six drivers of the government's overall economic programme.

SUBMISSION

ACTION 1: EXPLICITLY POSITIONING GOVERNMENT AS PRO-ACTIVE AND PRO-DEVELOPMENT OF PETROLEUM RESOURCES

IPENZ notes the alignment of this initiative with three of the six drivers of the government economic programme:

- Reforming the regulatory environment and cutting away red tape in the way of business and productive investment (Actions 5 and 6)
- Significantly lifting the performance of the public sector (Action 3)
- Innovation and Business assistance (Action 2 and 4)
- Taxation reviews (Action 5)
- Education and skills (no Action – discussed below)

Further development of New Zealand's oil and gas resources has the potential to make a significant contribution to lifting our productivity and closing the productivity gap with Australia. It is noted that the McDouall Stuart Report refers to the oil, gas and minerals sector being the quiet but already big achiever, and that there has been historically low political support towards this sector.

The government needs to provide the necessary political and policy leadership to grow this important sector as part of the overall plan to lift the economic performance of New Zealand.

As a relatively small industry in New Zealand in global terms, the oil and gas industry is dynamic and at times lacks critical mass. This is reflected in the shallowness of the supporting cluster industries, and the concerns over the lack of training courses and providers. It is estimated that less than 15 per cent of engineers in the petroleum industry are New Zealanders. Growing this industry will have the spin-off effect of developing the supporting infrastructure of people, skills, and small and medium enterprises (SMEs).

The government's proposed "sustained communications strategy" will need to be appropriately targeted at significant internationally-based petroleum industry players – on the assumption that local industry players should naturally be well informed of the government's proactive stance.

ACTION 2: DEVELOPING A CO-ORDINATED INVESTMENT STRATEGY TO IMPROVE KNOWLEDGE OF NEW ZEALAND'S PETROLEUM RESOURCES

Noting that New Zealand has the fourth largest Exclusive Economic Zone – 96 per cent of which is underwater and only 13 per cent of which has been mapped in any detail, the potential to improve our knowledge of and information on our petroleum resources is enormous. In international terms the size of the national economy is small and in reality the government will only be able to play a relatively small role. The government therefore needs to be strategic in its investment decisions to get the best return for its limited resources.

One of the key roles is the provision of good quality information. IPENZ supports the continuing provision of public-good funding to research, acquire, process and interpret geoscientific data, and make that data freely available. GNS Science is the primary public sector research agency for this sector and IPENZ recommends additional and better targeted funding of this agency. It is noted by GNS Science that there is no inventory map or comprehensive compilation of undrilled prospects in New Zealand.

The Ministry of Research Science and Technology (MORST), in assessing priorities, have identified research on “energy and minerals” as one of the priority investment areas to lift their contribution to economic growth and to increase security of supply of New Zealand energy resources. IPENZ supports this research and made this point in our recent submission (to MORST) on Priorities.

Ongoing funding of research by Crown Research Institutes is also required on hydrocarbons in general and in particular on gas hydrates. IPENZ also supports the development of a comprehensive hydrates information repository as recommended by the Centre for Advanced Engineering New Zealand (CAENZ). This is regarded as essential for future investigation and evaluation of the hydrates opportunity.

ACTION 3: CONDUCTING A SHORT FOCUSED REVIEW OF THE CROWN’S CAPABILITY AND RESOURCING TO MANAGE OUR PETROLEUM ESTATE

Recognising the potential of this sector to lift New Zealand’s economic performance and to improve the performance of the public sector, IPENZ believes that there should be a review of the Ministry of Economic Development’s (MED) capability to provide a greater level of support for this sector and deliver the seven actions of this Action Plan.

Experienced and capable petroleum sector resources within the MED will be a key component for success of the government’s Action Plan, and it will be vital that such resources hold the respect of the wider industry. This has unfortunately not always been the case in the past.

Important initiatives that are needed are:

- promoting New Zealand’s potential petroleum resources internationally (as noted above)
- improving co-ordination of policy development across relevant government agencies, and the education sector, and establishing an interdepartmental working group to achieve this
- resourcing much better dialogue, engagement and interaction with industry (the United Kingdom has been cited as an example where this allows a two-way flow of information)
- better management and stewardship of the large and valuable geoscientific datasets obtained from previous exploration efforts
- improving permit processing, approval of changes to permit conditions, and approvals for work programme modifications and extensions. The need for common sense flexibility will be paramount in this area
- a review of legislation as discussed below.

ACTION 4: IMPROVING THE QUALITY OF INFORMATION PROVIDED BY INDUSTRY PARTICIPANTS TO GOVERNMENT OF THE CROWN’S PETROLEUM RESOURCES

It is an important role for government to maximise the information publically available on potential petroleum resources and reserves data. IPENZ supports a review of the quality and quantity of this data whilst respecting the commercial confidentiality of this information. This will be a case of striking a balance between retaining and attracting investors through the provisions of better information, and providing a positive investment climate by protecting commercially sensitive information.

ACTION 5: REVIEWING OUR REGULATORY, ROYALTY AND TAXATION ARRANGEMENTS FOR PETROLEUM

It is noted from the McDouall Stuart Report that in the 2008 Global Petroleum Survey 2008 Rankings New Zealand rated particularly poorly on regulatory uncertainty. Forty per cent of respondents identified regulatory conditions as a strong deterrent to investment. This should be of major concern to the government.

To assist in improving the regulatory environment a review of the 2005 Mineral's Programme for Petroleum is required, taking into account comments made by key industry players:

- The Petroleum Exploration and Production Association of New Zealand (PEPANZ) are concerned that the opportunities to bid for exploration permits over open acreage are not frequent enough (PEPANZ Briefing to the Incoming Minister – December 2008).
- The CAENZ recommends there needs to be explicit recognition of the existence of gas hydrates under the existing permitting regime.

ACTION 6: REVIEWING AND, WHERE NECESSARY AMENDING, THE LEGISLATIVE FRAMEWORK OF THE PETROLEUM SECTOR

A review of the Crown Minerals Act 1991 is required. Two examples are:

- Section 41 – this requires the consent of the Minister for any agreement that may impact production from a permit, and gives the Minister the power to set new conditions. These provisions are considered very interventionist and bureaucratic by the industry and serve little public good purpose.
- Section 2 – the definition of “Mineral” does not adequately reflect the nature of gas hydrates

ACTION 7: UNDERTAKING FURTHER WORK TO DEVELOP A PATHWAY FOR REALISING THE POTENTIAL OF NEW ZEALAND'S GAS HYDRATES ENDOWMENT

IPENZ notes that CAENZ advise that the successful development of New Zealand's enormous coastal marine gas hydrates deposits will require extensive ongoing research over many years – but it has the potential to underpin our future energy supply system. IPENZ supports the view that the government needs to develop and implement a strategic programme to bring forward the assessment of the gas hydrates resource and the ongoing evaluation of the business case for gas hydrates development.

ADDITIONAL ACTION – EDUCATION AND SKILLS

Skill shortages – it is noted in the McDouall Stuart Report that there is substantial scope to improve the skill base in the petroleum industry and that currently the promotion of this industry as a career choice is very shallow. There is almost a complete absence of any university petroleum or related programmes being offered by the tertiary education sector.

IPENZ notes that the Petroleum Skills Association has developed a project plan to address these issues including promotion of the creation of pre-employment training pathways, and promotion of relevant training such as incorporating oil and gas electives into engineering degrees. In addition SPE NZ is also active in promoting petroleum engineering in particular as a stimulating career pathway. SPE NZ has been working with the University of Auckland on some early steps towards possible provision of a specialist

petroleum engineering degree course in future, rather than it just being a component of chemical engineering. IPENZ supports these initiatives.

In addition, this particular industry is supported by a wide range of other engineering and technical disciplines including electrical and mechanical engineers, and IPENZ has been working with the Department of Labour on identifying future demand and supply of engineers across all disciplines. This has resulted in engineering continuing to be listed as “essential skills in demand”, and the development of a National Engineering Education Plan. This is a collaborative project working with government agencies, universities, polytechnics and industry training organisations to ensure an adequate supply of engineers and technicians with the appropriate skill set.

IPENZ is also funded by government to promote science, engineering and technology as careers in secondary schools. This is done through the Futureintech programme.

It is also worth noting that, in the context of the Essential Skills in Demand lists, SPE NZ made submissions to Immigration New Zealand/Department of Labour last year on the need to retain petroleum engineering on the Immediate Skill Shortage List (ISSL).

The MED needs to support these initiatives and projects, and work with government’s education sector, as part of the government’s overall programme of lifting the economic performance of New Zealand. IPENZ is of the strong view that education and skills should be an additional action in the government’s Action Plan to align with the six drivers of the government’s economic programme.

CONCLUSION

IPENZ would like to thank the Ministry of Economic Development for the opportunity to make this submission and are happy to provide any further information.