



KEMPSEY  
Shire Council

## DIRECTOR CORPORATE SERVICES REPORT

11<sup>th</sup> October 2005

**DCS5            ALTERNATIVE FUELS**  
**FILE: 151        MPM**

### SUMMARY:

Reporting on alternative fuels for council fleet.

TTTTT

At Council's last meeting, 13<sup>th</sup> September 2005, it was resolved that further information be sought on alternative fuels for council's sedan fleet. An initial report was submitted and detailed cost benefits of changing from 6 cylinder petrol driven sedans to 4 cylinder diesel driven sedans. The report is attached at [\(Appendix C\)](#) and should be read in conjunction with this report.

Research was carried out on a number of alternate fuel supply opportunities for existing council sedan fleet with further information on new technology ULP/Electric hybrid vehicles.

### **Ethanol ULP mix (E10)**

E10 is a mix of 10% ethanol and 90% ULP and at this stage not widely available, particularly in regional areas. Currently E10 is similar in cost as standard ULP and also shows an approximate increase in fuel consumption of approximately 2.8%. It is expected apart from the environmental savings from using ethanol blends that the future cost of E10 will realise an approximate saving of 6% against standard ULP.

Based on current data, should E10 become available a recommendation to use this alternate fuel would be put forward.

### **Liquid Petroleum Gas (LPG)**

More commonly available than E10 in NSW, although in some regional areas still not available, South West Rocks would be an example in the Kempsey Shire. Greenhouse ratings are average due to the higher fuel consumption compared to similar ULP driven

vehicle which in turn does not necessarily make them a more friendly fuel derivative.

On average LPG is significantly cheaper fuel to purchase, currently approximately 0.55 cents per litre and if calculated using as a test case Ford Falcon with the fuel consumption rate approximately 16 litres per 100 kms, does sound attractive, but with increased capital outlay at time of purchase (\$4,000.00) and a reduction in resale of approx 15% compared to the ULP alternative, does not present more cost effective than the 4 cylinder diesel sedan as previously reported on.

## ULP Electric Hybrid

There are currently 2 hybrid vehicles available in Australia at present with the more widely known being the Toyota Prius. Without a doubt the Toyota Prius is the most environmentally friendly vehicle in today's market with a Green Fleet Vehicle rating of 17.5/20 and Council's currently participating in trials of this vehicle should be commended, but it does come at a price as is shown below;

- Initial capital cost increase of approximately \$9,000.00 over Commodore, Falcon, Golf
- With an increase in capital cost comes an increase in FBT liability  
*(FBT is calculated as a percentage of capital cost p/a)*
- Fuel consumption rate based on data from the local supplier in Port Macquarie is approximately 5 lts/100kms (similar to that of the VW Golf Diesel)

It must be remembered that the vehicle combines both electric power and a petrol driven engine and when used away from city driving or with air conditioning running continuously, the petrol engine will run more frequent, reflecting why we see the increase in the fuel consumption from what is advertised (4.1lts/100kms)

- Inability to fit tow bars
- Significant loss at time of resale, though this expected to be short term with increased sales and market acceptance.  
*Current resale only shows an approximate 57% return at time of resale with 40,000 kms compared to the current 70% return with Holden Commodore ULP.*

## Fuel Consumption/Clean Car Benchmark Comparison Table

Table 1

Make	Fuel Consumption litres/100kms	Fuel Type	Fuel Cost per Litre	Fuel Cost based on 40K	Clean Car Benchmark Rating
Holden Commodore	11.1	ULP	\$1.38	\$6127	9.5/20
Holden Commodore (expected)	11.41	E10 10%Ethanol/90%ULP mix	\$1.29	\$5887	No data available (expect

costs)					environmental savings)
Ford Falcon LPG	16.0	LPG	0.55c	\$3520	11/20
VW Golf	5.5	Diesel	\$1.33	\$2926	14/20
Toyota Prius	5.0	ULP/Electric	\$1.38	\$2760	17.5/20

## Conclusion:

A number of considerations should be taken into account when assessing best outcomes for Council and these are highlighted in the previous report (13<sup>th</sup> September 2005), with the two key issues presently being;

**Financial** – Whole of Life Cost, which incorporates both capital cost and operational and Fuel Costs and

**Environmental** – CO2 emissions and Air Pollutants.

The assessment process when determining the most beneficial outcome for not only Council but also the environment will weigh up such things as fuel cost, fuel consumption, operational costs, capital cost, changeover costs and environmental and based on the evidence provided above and in the previous report, there appears at this stage to be limited financial or environmental benefit in a move to LPG.

Extra capital cost in the case of the LPG alternate, reduced resale and the requirement to run vehicles anywhere from 18 months to 3 years, depending on annual usage, before negating the increased purchase cost, still shows the previously recommended 4 cylinder diesels presenting the best value option for Council.

The Toyota Prius, although not currently an option, presents a different set of scenarios with significant environmental benefits. With the current climate of high fuel prices and community concern over the environment we may well see a situation where the market for these second hand hybrid vehicles does develop and in that case these may well be an option for Council in the future.

## REPORT IMPLICATIONS:

- ***Environmental***

*Nil*

- ***Social***

*Nil*

- ***Economic (Financial)***

***As per the report***

- *Policy or Statutory*

*There are no policy or statutory implications arising from this report.*

- *Director's Review*

*As discussed in the previous report Council should adopt a flexible approach in respect of its vehicle fleet so as to be able to optimise the conditions which exist at any given point in time.*

## **RECOMMENDATION:**

**That Council through negotiation and consideration of the requirements of staff and job use, where appropriate purchase four cylinder Diesel passenger vehicles in preference to the existing practice of purchasing 6 cylinder petrol sedans.**

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**G B Snape**  
**DIRECTOR CORPORATE SERVICES**