

AGENDA ITEM SUMMARY

FORT COLLINS CITY COUNCIL

ITEM NUMBER: 12

DATE: August 17, 2004

STAFF: Michael Smith
Gary Schroeder/Ken Mannon

SUBJECT

First Reading of Ordinance No. 128, 2004, Appropriating Unanticipated Revenue and Prior Year Reserves in the Light and Power Fund and Authorizing the Transfer of Existing Appropriations in the Equipment Fund for the Purpose of Purchasing Hydrogen Fueling Equipment and Infrastructure at the Transfort Alternative Fueling Station.

RECOMMENDATION

Staff recommends adoption of the Ordinance on First Reading.

FINANCIAL IMPACT

The \$35,000 requested from prior year reserves in the Light and Power Fund represents 4% cost share for the total Transfort Alternative Fueling Station. Grants of \$286,266 and \$210,000 will cover 58% of the total project cost. Remaining funds needed to complete the project will come from existing appropriations totaling \$207,000 from the City's Equipment Fund.

EXECUTIVE SUMMARY

This Ordinance authorizes a \$35,000 appropriation of prior year reserves in the Light and Power Fund for purchase of hydrogen fueling equipment and infrastructure for the Transfort Alternative Fueling Station. In addition, this Ordinance authorizes appropriation of \$210,000 in equipment and funds being donated by the Colorado Governor's Office of Energy Management and Conservation to the Transfort Alternative Fueling Station. This Ordinance also authorizes transfer of \$207,000 from the Equipment Fund operations budget to the Equipment Fund – Transfort Alternative Fueling Station.

BACKGROUND

In January of 2001, City Manager, John Fischbach created the Hydrogen Task Force ("HTF") to explore the City's potential use of hydrogen as a power supply. On August 27, 2001, the HTF submitted a report titled "Report of the City of Fort Collins Hydrogen Task Force" with its findings and recommendations for hydrogen projects.

The Report led to Council's adoption in March, 2002, of Resolution 2002-027, Establishing a Policy to Implement Hydrogen-Related Projects Within the City

(<http://fcgov.com/utilities/htf.php>). After further staff research into potential projects and grant and partnership opportunities, a hydrogen update report was submitted, dated October 28, 2003, with more specific findings and recommendations.

Shortly after release of the updated report, the Colorado Governor's Office of Energy Management and Conservation ("OEMC") agreed to donate to the City \$210,000 for the purchase of an electrolyzer, which generates hydrogen by using electricity to split water into hydrogen and oxygen, and other fueling equipment. As a result, the City will be able to add a Hythane®/Hydrogen fueling plant to the previously planned Transfort Alternative Fueling Station ("TAFS"). Hythane is a mixture of natural gas and hydrogen.

The TAFS gives the City a solid start in hydrogen infrastructure. Hythane can be used directly in vehicles designed to operate on compressed natural gas ("CNG") which the City already owns. The use of Hythane in such vehicles typically results in a 40%-50% reduction in emissions over CNG. The Hythane/Hydrogen fueling plant can also dispense pure hydrogen. This flexibility presents several opportunities: (1) purchase a transitional pure hydrogen vehicle, such as the hydrogen hybrid to be offered to fleets by Ford; (2) attract vehicle demonstrations with the large automakers which are currently testing fuel cell vehicles in various climates; (3) establishes a "springboard" from which to develop other hydrogen projects.

The Hythane/Hydrogen fueling plant will utilize a relatively small (25 kW) electrolyzer to produce hydrogen. Utilities will have the opportunity to learn more about the operation of these devices, which are likely to become widely available to consumers as the hydrogen economy develops. Several manufacturers currently have prototype electrolyzers designed to be installed in residential garages and would use Utility power to fuel a hydrogen vehicle overnight. With these future applications in mind, Utilities staff will assist with implementing electrolyzer controls to prevent the electrolyzer from operating during peak periods. This will reduce operating costs as well as impacts on the distribution grid.

Another consideration with the electrolyzer is, when coupled with a fuel cell or engine generator, the electrolyzer becomes a component of an electrical storage system. This is valuable in managing peak periods of electrical usage as electricity shaving and storage of renewably-generated electricity from intermittent sources such as solar electric systems and wind generators can be accomplished. Data gathered from the electrolyzer used for this project will be valuable in evaluating these types of future applications.

City policy that supports this project is as follows:

- This is a pilot project in support of Resolution 2002-027 Establishing a Policy to Implement Hydrogen-related Projects within the City.
- This project is supported by the 2003-2005 Council Policy Agenda, Adopted September 2, 2003, Theme 6: Environment, Target 1: Develop a comprehensive Energy Policy for City operations and the community, Objective d. Study and implement additional ways to reduce environmental impact of City operations. It is also supported by Target 4: Enhance air quality policies, Objective c. Continue to evaluate sources of clean energy, especially hydrogen.

- This project is consistent with Fort Collins Local Action Plan to Reduce Greenhouse Gas Emissions, adopted by Resolution 99-137 and has the potential to substantially reduce local emissions of City buses and fleet vehicles and educate local safety officials regarding hydrogen.
- In 1997, Fort Collins City Council adopted Resolution 97-051, outlining the City's role as energy provider, user, and educator. This resolution states: "That as a user of energy, ... The City shall also regularly evaluate the latest technologies utilizing alternative fuels for transportation and, to the greatest extent practicable, apply such technologies to the operation of City vehicles in order to provide energy efficient transportation."

ATTACHMENTS

Resolution 2002-027

ORDINANCE NO. 128, 2004
OF THE COUNCIL OF THE CITY OF FORT COLLINS
APPROPRIATING UNANTICIPATED REVENUE AND PRIOR YEAR RESERVES IN THE
LIGHT AND POWER FUND AND AUTHORIZING THE TRANSFER OF EXISTING
APPROPRIATIONS IN THE EQUIPMENT FUND FOR THE PURPOSE OF PURCHASING
HYDROGEN FUELING EQUIPMENT AND INFRASTRUCTURE AT THE TRANSFORT
ALTERNATIVE FUELING STATION

WHEREAS, on March 19, 2002, the City Council adopted Resolution 2002-027, establishing a policy to implement hydrogen-related projects within the City; and

WHEREAS, the Colorado Governor's Office of Energy Management and Conservation agreed to donate \$210,000 worth of fueling equipment and funds, to be used with other City funds, to add a Hythane®/Hydrogen fueling appliance to the fueling facility at the City's Transfort site on Trilby Road (Transfort Alternative Fueling Station); and

WHEREAS, Hythane (a mixture of natural gas and hydrogen), an alternative vehicle fueling source, can be used directly in the City vehicles designed to operate on compressed natural gas ("CNG"); and

WHEREAS, the use of Hythane typically results in a 40-50% reduction in emissions over the use of CNG; and

WHEREAS, pure hydrogen can also be dispensed from the proposed Hythane®/Hydrogen appliances allowing the City to purchase hydrogen vehicles in the future; and

WHEREAS, the estimated cost of the Hythane®/Hydrogen appliances and related infrastructure improvements is \$452,000, with available funding identified as follows:

Colorado Governor's Office of Energy Management and Conservation - Equipment Donation	\$ 210,000
City's Light & Power Fund - Prior Year Reserves	\$ 35,000
City's Equipment Fund - Existing Appropriations	<u>\$ 207,000</u>
Total	\$ 452,000

WHEREAS, Article V, Section 9, of the Charter of the City of Fort Collins ("Charter") permits the City Council to make supplemental appropriations by ordinance at any time during the fiscal year, provided that the total amount of such supplemental appropriations, in combination with all previous appropriations for that fiscal year, does not exceed the current estimate of actual and anticipated revenues to be received during the fiscal year; and

WHEREAS, City staff has determined that the appropriation of the donated equipment and funds, as described herein, will not cause the total amount appropriated in the relevant funds to exceed the current estimate of actual and anticipated revenues to be received during the fiscal year; and

WHEREAS, Article V, Section 9, of the Charter also permits the City Council to appropriate by ordinance at any time during the fiscal year such funds for expenditure as may be available from reserves accumulated in prior years, notwithstanding that such reserves were not previously appropriated; and

WHEREAS, Article V, Section 10, of the Charter authorizes the City Council to transfer by ordinance any unexpended and unencumbered amount or portion thereof from one fund or capital project to another fund or capital project, provided that the purpose for which the transferred funds are to be expended remains unchanged; and

WHEREAS, it is the desire of the Council to authorize the acceptance of the donation of the hydrogen fueling equipment and funds for a total value of \$210,000 from the Colorado Governor's Office of Energy Management and Conservation, appropriate the sum of \$35,000 from prior year reserves in the Light & Power Fund for transfer to the City's Equipment Fund - Hythane®/Hydrogen Appliance project, for appropriation therein, and authorize the transfer of existing appropriations, totaling \$207,000, from the City's Equipment Fund to a Hythane®/Hydrogen Appliances project, within the Equipment Fund, to be used to install Hythane® / Hydrogen fueling appliances at the Transfort Alternative Fueling Station; and

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF FORT COLLINS as follows:

Section 1. That there is hereby appropriated for expenditure from unanticipated revenues in the Equipment Fund - Hythane®/Hydrogen Appliance project the sum of TWO HUNDRED TEN THOUSAND DOLLARS (\$210,000) to be used to install Hythane®/Hydrogen fueling appliances at the Transfort Alternative Fueling Station.

Section 2. That there is hereby appropriated for expenditure from prior year reserves in the Light & Power Fund for transfer to the Equipment Fund - Hythane®/Hydrogen Appliance project, and appropriated therein, the sum of THIRTY-FIVE THOUSAND DOLLARS (\$35,000) to be used to install Hythane®/Hydrogen fueling appliances at the Transfort Alternative Fueling Station.

Section 3. That the unexpended appropriated amount of TWO HUNDRED SEVEN THOUSAND DOLLARS (\$207,000) is hereby authorized for transfer from the Equipment Fund operations budget to the Equipment Fund - Hythane®/Hydrogen Appliance project to be used to install Hythane® / Hydrogen fueling appliances at the Transfort Alternative Fueling Station.

Introduced, considered favorably on first reading, and ordered published this 17th day of August, A.D. 2004, and to be presented for final passage on the 7th day of September, A.D. 2004.

Mayor

ATTEST:

City Clerk

Passed and adopted on final reading this 7th day of September, A.D. 2004.

Mayor

ATTEST:

City Clerk

RESOLUTION 2002-027
OF THE COUNCIL OF THE CITY OF FORT COLLINS
ESTABLISHING A POLICY TO IMPLEMENT
HYDROGEN-RELATED PROJECTS WITHIN THE CITY

WHEREAS, on February 18, 1997, the City Council, by Resolution 97-25, adopted the Community Visions and Goals 2015, City Structure Plan, and City Plan Principles and Policies as elements of the Comprehensive Plan of the City, also known as "City Plan", which supports improving air quality, reducing motor vehicle emissions, encouraging and facilitating increased energy efficiency and use of renewable resources, and to solicit cooperation and participation of independent community organizations; and

WHEREAS, on April 1, 1997, the Council adopted Resolution 97-51 providing that as a user of energy, the City shall regularly evaluate the latest technologies utilizing alternative fuels for transportation and, to the greatest extent practicable, apply such technologies to the operation of City vehicles in order to provide energy efficient transportation; and

WHEREAS, Resolution 97-51 also provides that as community leader, the City should also regularly evaluate means by which City-wide demand and usage of fossil fuels can be reduced and should attempt to develop means by which it can further such goals, through the City's role as educator, promoter and regulator; and

WHEREAS, on November 16, 1999, the Council adopted Resolution 99-137 establishing a policy to take cost-effective actions that benefit the community to reduce local greenhouse gas emissions; and

WHEREAS, the increased use of hydrogen can provide benefits to the citizens of Fort Collins such as improved air quality, reduced greenhouse gas emissions, reduced dependence on imported oil, and keeping energy dollars in the local and state economy; and

WHEREAS, many organizations and companies in the United States and around the world are actively engaged in research, development, and demonstration of hydrogen technologies; and

WHEREAS, the federal government is putting increased resources towards research on hydrogen-fuel-cell vehicles and infrastructure; and

WHEREAS, in December, 2000, the City Manager appointed a Hydrogen Task Force to evaluate hydrogen technologies and to make recommendations on what the City could do with regards to hydrogen; and

WHEREAS, on August 27, 2001, the Hydrogen Task Force submitted a report to the City Manager recommending the City take certain actions with regards to hydrogen; and

WHEREAS, the City is in a unique position to attract hydrogen-related projects and funding, due to the potential for region partnerships, development of the Mason Street Corridor, a favorable testing environment for technologies with high altitude and extreme weather variation, and access to local sources of hydrogen; and

WHEREAS, at its February 12, 2002, Study Session, the Council directed the Hydrogen Task Force to draft a resolution outlining the next steps to be taken to develop opportunities for the City related to hydrogen technologies.

NOW THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF FORT COLLINS as follows:

Section 1. That the City Manager is hereby directed to seek external grant funding for the purpose of hiring a grant writer and for implementing demonstration projects for hydrogen-related technologies.

Section 2. That the City Manager is hereby directed to explore partnerships that would facilitate the creation of hydrogen projects.

Section 3. That the City Manager is hereby directed to develop a public education plan intended to provide hydrogen education to the community, and to proceed to implement that plan.

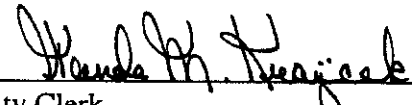
Section 4. That no later than the end of 2003, the City Manager is hereby directed to report to the Council his recommendations for hydrogen-related projects for Council review based upon the feasibility of such projects considering the available grant funds and other non-City resources and general project costs.

Passed and adopted at a regular meeting of the Council of the City of Fort Collins held this 19th day of March, A.D. 2002.



Mayor

ATTEST:



City Clerk