

HOUSE OF REPRESENTATIVES STAFF ANALYSIS

BILL #: HB 1597 CS Hydrogen Energy Technology
SPONSOR(S): Hasner and others
TIED BILLS: None **IDEN./SIM. BILLS:** SB 2074

REFERENCE	ACTION	ANALYST	STAFF DIRECTOR
1) <u>Spaceport & Technology Committee</u>	<u>5 Y, 0 N, w/CS</u>	<u>Cheek</u>	<u>Saliba</u>
2) <u>Finance & Tax Committee</u>	<u>9 Y, 0 N</u>	<u>Noriega</u>	<u>Diez-Arguelles</u>
3) <u>State Infrastructure Council</u>	<u>8 Y, 0 N, w/CS</u>	<u>Cheek</u>	<u>Havlicak</u>
4) _____	_____	_____	_____
5) _____	_____	_____	_____

SUMMARY ANALYSIS

There are no current statutory provisions for the development of hydrogen energy technologies through the use of grant monies, sales and use tax exemptions, or investment tax credits. This bill creates the "Hydrogen Energy Technologies Act" (Act).

Hydrogen Energy Technologies Grants Program

The bill provides for grants for demonstration and commercialization projects and for research and development relating to hydrogen energy technologies and electrical grid optimization. The grants program is administered by the Department of Environmental Protection (DEP).

Sales and Use Tax Exemption for Hydrogen Energy Technologies

In addition, the bill provides an exemption from the sales tax for the sale at retail, the rental, the use, the consumption, the distribution, and the storage to be used or consumed in this state of equipment, machinery, and other materials for hydrogen energy technologies. The exemption is repealed on July 1, 2009.

Tax Credit

The bill also creates the hydrogen energy technologies investment tax credit, which provides a credit against Florida corporate income tax equal to 75% of the eligible costs of an investment in hydrogen energy technologies. The credit will be repealed on July 1, 2009.

Environmental Cost Recovery and Fire Safety

The bill authorizes regulated electric utilities to recover from customers costs or expenses incurred by the utility in deploying hydrogen energy technologies. Costs that have received a tax credit are not eligible for cost recovery. The bill requires the State Fire Marshal to establish uniform fire safety standards applying to hydrogen fueling, storage, and production facilities for stationary fuel cells and vehicles, including maintenance and repair facilities.

The bill provides rulemaking authority to DEP, the Department of Revenue (DOR), and the State Fire Marshal to adopt policies and procedures to implement the newly created Act, including requirements relating to application and approval process, records to be submitted in substantiation of an application, and determination of and qualification for reimbursement.

The bill does not provide an appropriation to fund the Hydrogen Energy Technologies Grants Program; however, HB 1885, 1st Engrossed, the House's General Appropriations Bill contains an appropriation of \$1.2 million from the General Revenue Fund for the grant program. The tax provisions of the bill will reduce state revenues by \$2.1 million for FY 2005-06 and \$3.2 million for FY 2006-07. The amount of the environmental cost recovery is unknown. The bill provides for a July 1, 2005 effective date.

This document does not reflect the intent or official position of the bill sponsor or House of Representatives.

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FULL ANALYSIS

I. SUBSTANTIVE ANALYSIS

A. HOUSE PRINCIPLES ANALYSIS:

Provide Limited Government – The bill increases the responsibilities of DEP, DOR, and the State Fire Marshal by providing: 1) grants for demonstration and commercialization projects and for research and development relating to hydrogen energy technologies and electrical grid optimization; 2) a sales and use tax exemption for equipment, machinery, and other materials for hydrogen energy technologies; and 3) a corporate income tax credit equal to 75% of the eligible cost associated with an investment in hydrogen energy technologies.

Ensure Lower Taxes – The bill provides an exemption from the sales tax for the sale at retail, the rental, the use, the consumption, the distribution, and the storage to be used or consumed in this state of equipment, machinery, and other materials for hydrogen energy technologies. The bill also creates the hydrogen energy technologies investment tax credit, which is mentioned above.

To the extent that Florida's regulated utilities invest in hydrogen technologies that not only meet the definition of "hydrogen energy technology," but that also have the potential to contribute to the provision of adequate and reliable electric service in the state with minimal rate impacts, the costs of these investments can be passed on to the investing utility's customers through an environmental compliance cost recovery proceeding at the Public Service Commission (PSC).

B. EFFECT OF PROPOSED CHANGES:

Present Situation

Department of Environmental Protection (DEP)

According to DEP, Florida is highly dependent upon fossil fuels produced outside the United States. Currently, oil, coal and natural gas provide about 75% of the fuel necessary to generate electricity within Florida. In addition, over 86% of petroleum products arriving in Florida, which fuel everything from electricity generation to trucks and automobiles, can be attributed to overseas suppliers. It is projected that by 2012, 47% of Florida's electricity supply will be powered by natural gas. Based upon current forecasts, up to 62% of the total supply could be attributed to overseas suppliers in the form of liquid natural gas. However, during recent months, the market prices of oil and natural gas have been rapidly climbing as a result of several market forces. The prices of these fossil fuels are not only expected to remain highly volatile within the foreseeable future, but the long-term implications for Florida's economy may also be significant given the level of the state's reliance on these fuels.

About 80% of Florida's energy is used for electrical generation and transportation. Of that percentage, electricity generation makes up the largest portion, along with a variety of emissions. For example, on average, each megawatt-hour of electricity produced in Florida creates 4.61 lbs. of smog-forming nitrogen oxide (NO_x) emissions – slightly lower than the national average.

Hydrogen fuel cells offer the potential for zero-emission power. The electricity generated by stationary fuel cells that obtain hydrogen from renewable sources (solar power, wind power, etc.) is pollution-free. The same is true for vehicles that are powered by hydrogen. Vehicles that use fuel cells have zero tailpipe emissions, and vehicles that are powered by hydrogen-fueled internal combustion engines have near zero NO_x emissions.

Around the world, energy companies, major automakers and petroleum companies are investing more than \$2 billion a year to develop new hydrogen energy technologies. It is projected that by 2010, North American demand for this technology could exceed \$14.5 billion.

Current Law

Chapter 212 provides for a tax on sales, use, and other transactions. Section 212.08, F.S., provides an exemption from that tax for the sale at retail, the rental, the use, the consumption, the distribution, and the storage to be used or consumed in this state of specified items or types of items.

Section 213.053, F.S., provides for confidentiality of information contained in returns, reports, accounts, or declarations received by DOR relating to specified taxes, and provides for the sharing of specified types of information with specified government entities for specified purposes.

Section 220.02, F.S., provides definitions for use in the Florida Corporate Income Tax Code.

Section 220.13, F.S., defines the term “adjusted federal income” and specifies additions to be made to that income in applying the Code.

Section 366.8255, F.S., provides for the recovery of environmental compliance costs by regulated electric utilities. The term “environmental compliance costs” includes all costs or expenses incurred by an electric utility in complying with environmental laws or regulations, including but not limited to:

- In service capital investments, including the electric utility's last authorized rate of return on equity;
- Operation and maintenance expenses;
- Fuel procurement costs;
- Purchased power costs;
- Emission allowance costs;
- Direct taxes on environmental equipment; and
- Costs or expenses prudently incurred by an electric utility pursuant to an agreement entered into on or after the effective date of this act and prior to October 1, 2002, between the electric utility and DEP or the United States Environmental Protection Agency for the exclusive purpose of ensuring compliance with ozone ambient air quality standards by an electrical generating facility owned by the electric utility.

“Environmental laws or regulations” include all federal, state, or local statutes, administrative regulations, orders, ordinances, resolutions, or other requirements that apply to electric utilities and are designed to protect the environment.

If a regulated utility is seeking recovery of environmental compliance costs, it must submit a petition to the PSC describing its proposed environmental compliance activities and projected environmental compliance costs. If the PSC approves the petition, the utility's prudently-incurred environmental compliance costs are recovered through an environmental compliance cost-recovery factor that is separate and apart from its base rates.

Section 633.022, F.S., requires that the Chief Financial Officer, acting as State Fire Marshal, establish uniform fire safety standards that apply to specified circumstances.

Effect of Proposed Changes

The “Hydrogen Energy Technologies Act”

HB 1597 w/CS creates ss. 377.801-377.805 and provides the popular name, the “Hydrogen Energy Technologies Act” (Act). The bill provides legislative findings, intent, and definitions.

Hydrogen Energy Technologies Grants Program

The bill provides a matching grants program to stimulate capital investment in this state and to enhance the market for, as well as promote the statewide use of, hydrogen energy technologies. The grants program is designed to advance the already growing establishment of hydrogen energy technologies in the state and encourage the use of other incentives such as tax exemptions and to provide regulatory certainty in order to attract additional producers, developers, and users of hydrogen energy technologies to this state. The bill provides the following definitions for use in applying the Act:

- “Balance of plant” means all equipment and components directly involved in the generation, storage, or use of hydrogen for energy production located at the site of hydrogen generation or use.
- “Department” means the Department of Environmental Protection.
- “Fuel cell” means equipment using an electrochemical process to generate energy or electricity or to transfer heat.
- “Electrical grid optimization” means the use of hydrogen energy technology to assist in decreasing electrical peak demand.
- “Hydrogen energy technology” means any technology that is used primarily for the purpose of generating or using hydrogen directly as a fuel in this state, including, but not limited to:
 1. Stationary fuel cell systems, or internal combustion engine systems fueled with hydrogen, used for power generation, including prime power, supplemental power, and back-up power, and the balance of plant.
 2. On-road and off-road vehicles and watercraft powered by fuel cells or internal combustion engines fueled with hydrogen.
 3. Fueling systems and supportive infrastructure.
 4. Renewable energy resource systems used to electrolytically produce hydrogen.
 5. Reformer technologies used to produce hydrogen from the respective hydrogen carrier, including, but not limited to, steam-methane, biomass, and chemical.
 6. Electrical grid electrolysis.
 7. Electrical grid optimization technologies.
- “Person” means an individual, partnership, joint venture, private or public corporation, association, firm, public service company, or any other entity, public or private, however organized.
- “Renewable energy resource” means any method, process, or substance, the use of which does not diminish its availability or abundance, including, but not limited to, solar energy, wind energy, thermal gradient power, hydroelectric power, and fuels derived from agricultural products, but does not include fossil fuels or nuclear power.

The Hydrogen Energy Technologies Grants Program is established within DEP to provide hydrogen energy matching grants for demonstration and commercialization projects and for research and development relating to hydrogen energy technologies and electrical grid optimization. Matching grants may be made to any of the following based on the factors discussed below:

- Municipalities and county governments.
- Established for-profit companies licensed to do business in this state.
- State universities.

- Utilities located and operating within the state.
- Nonprofit organizations.
- Qualified persons.

Factors that DEP is to consider in awarding grants include, but are not limited to:

- The extent to which the project stimulates in-state capital investment and economic development in metropolitan and rural areas, including job creation and the future development of a commercial market for clean energy technologies.
- The availability of matching funds from an applicant, and the applicant's commitment to provide matching funds.
- The ability to administer a complete project.
- Project duration and the timeline for expenditures.
- The geographic area of the state in which the project is to be conducted in relation to other projects.
- Other in-kind contributions applied to the total project.
- The extent to which the project incorporates an innovative new technology or an innovative application of an existing technology.
- The degree to which a project generates thermal or electrical energy by means of a low or zero-emissions generation technology or renewable energy resource that has substantial potential for long-term production.
- The degree to which the project fosters an overall understanding and appreciation of clean energy technologies by the general public, students, or a specific government or sector of industry.
- The degree of public visibility and interaction.

Grants awarded to any entity may subsequently be increased by the DEP upon a determination that sufficient factors are met for the additional funds.

DEP is required to adopt rules to administer the awarding of grants under this program.

DEP is also required to provide a progress report on grants awarded to the Governor, the President of the Senate, and the Speaker of the House of Representatives. The report must include:

- A description of the extent to which the grants program is benefiting the state's environment, public health, and economic development.
- A list of grant recipients.
- The amount of each grant.
- The amount of matching funds provided by recipients.
- The date of each grant.
- A description of each project or expansion funded by a grant.
- A description of each project's contribution to the state's knowledge and use of hydrogen energy technologies.

Sales and Use Tax Exemption for Hydrogen Energy Technologies

HB 1597 w/CS provides an exemption from the sales tax for the sale at retail, the rental, the use, the consumption, the distribution, and the storage to be used or consumed in this state of equipment, machinery, and other materials for hydrogen energy technologies. The exemption is repealed July 1, 2009. The exemption is for the sale or use of hydrogen energy technologies and of materials used in

the manufacture of hydrogen energy. DEP is required to provide DOR a list of items considered to meet the definition of hydrogen energy technologies. Any person may request a determination from DEP as to whether an item that is not on the list meets the definition of hydrogen energy technology, and DEP must make a determination and issue a revised list if appropriate. DEP may adopt rules to administer the exemption and the DOR may provide procedures by rule for purchasers to make tax-exempt purchases.

Tax Information Sharing

The bill provides that DOR may share with DEP information, for use in conducting its official business, relating to sales tax on equipment, machinery, and other materials for hydrogen energy technologies and the associated investment tax credit. The bill includes the hydrogen energy technologies investment tax credit in the list of tax credits to be applied against either the corporate income tax or the franchise tax.

Investment Tax Credit and Add-back

The bill creates the hydrogen energy technologies investment tax credit, which provides a credit against Florida corporate income tax equal to 75% of the eligible costs of an investment in hydrogen energy technologies. The corporate income tax credit is to be repealed on July 1, 2009. The bill creates the following definitions for purposes of this credit:

- “Eligible costs” means all capital costs, operation and maintenance costs, and research and development costs incurred between July 1, 2005, and June 30, 2009, in connection with an investment in hydrogen energy technologies in this state, including, but not limited to, the costs of acquiring, leasing, constructing, installing, equipping, and financing hydrogen energy technologies in this state; all obligations incurred for labor; and obligations to contractors, subcontractors, builders, and materialmen in this state.
- “Hydrogen energy technology” means hydrogen energy technology as defined in s. 377.804(6), F.S.

This bill creates a credit against the tax imposed by chapter 220, F.S., in an amount equal to 75% of the eligible costs. Credits may be used in tax years beginning on or after January 1, 2005, and ending on or before December 31, 2011, after which the credit expires and may not be used. If the credit is not fully used in any one tax year because of insufficient tax liability on the part of the corporation, the unused amount may be carried forward and used in tax years beginning on or after January 1, 2006, and ending on or before December 31, 2011, after which the credit carryover expires and may not be used. A taxpayer that files a consolidated return in this state as a member of an affiliated group under s. 220.131(1), F.S., may be allowed the credit on a consolidated return basis up to the amount of tax imposed upon the consolidated group. Any eligible cost for which a credit is claimed and which is deducted or otherwise reduces federal taxable income shall be added back in computing adjusted federal income under s. 220.13, F.S.

Any corporation wishing to obtain tax credits must submit an application to DEP that would include a complete description of all eligible costs for which the corporation is seeking a credit, as well as a description of the total amount of credit sought. DEP must determine the applicant's eligibility for the credits sought, and certify the determination to the applicant and to DOR. The corporation must attach DEP's certification to the tax return on which the credit is claimed. DEP may adopt the necessary rules, guidelines, and application materials for the application process.

In addition to its existing audit and investigation authority, DOR may perform any additional financial and technical audits and investigations, including examining the accounts, books, and records of the tax credit applicant which are necessary to verify the eligible costs included in the tax credit return and to ensure compliance. DEP is to provide technical assistance when requested by the DOR on any technical audits or examinations performed. If DOR receives information from DEP or conducts an internal audit or examination revealing that a taxpayer received tax credits to which the taxpayer was

not entitled, this constitutes grounds for forfeiture of previously claimed and received tax credits. If so, the taxpayer is responsible for returning the forfeited tax credits to DOR, which will be paid into the state's General Revenue Fund.

In addition, DEP may revoke or modify any written decision granting eligibility for tax credits if it is discovered that the tax credit applicant submitted any false statement, representation, or certification in any application, record, report, plan, or other document filed in an attempt to receive tax credits under this section. DEP must immediately notify DOR of any revoked or modified orders affecting previously granted tax credits. Additionally, the taxpayer must notify the DOR of any change in the tax credit claimed. The taxpayer is to file an amended return with DOR or such other report as DOR prescribes by rule, and shall pay any required tax and interest within 60 days after the taxpayer receives notification from DEP that previously approved tax credits have been revoked or modified, if uncontested, or within 60 days after a final order is issued following proceedings involving a contested revocation or modification order. A notice of deficiency can be issued by DOR at any time within five years after the taxpayer receives formal notification from DEP that previously approved tax credits have been revoked or modified. If a taxpayer fails to notify DOR of any changes to its tax credit claimed, a notice of deficiency can be issued.

A taxpayer that receives a credit for the construction or purchase of structures or the purchase of equipment can recapture and repay the amount of credit attributable to such property if that property is not used by the taxpayer for hydrogen energy technologies through the warranty period of the complete system or system components. If a warranty is not provided by the equipment manufacturer, the equipment must be operated for the useful life of the complete system or system components. Credit is not allowed for an eligible cost associated with an investment in hydrogen energy technologies if the credit has previously been allowed for such eligible cost.

DOR may adopt the forms required to claim a tax credit, the requirements and basis for establishing an entitlement to a credit, and procedures for the examinations and audits required to administer this section by rule.

The provisions of the corporate income tax credit, except the credit carryover provisions, expire on July 1, 2009.

The bill also includes the necessary changes to s. 220.13, F.S., - *Adjusted federal income*, to include the hydrogen energy technologies investment tax credit claimed that tax year.

Environmental Cost Recovery and Fire Safety

The bill provides for recovery of environmental compliance costs by a regulated electric utility. The bill amends the general definition of "environmental compliance costs" by adding "all costs or expenses incurred by an electric utility in deploying hydrogen energy technologies as defined in s. 377.804(6)," (as created by this bill), then adds to the types of costs included in this term "[c]osts incurred between July 1, 2005, and June 30, 2009, for hydrogen energy technologies, as defined in s. 377.804(6), which have the potential to contribute to the provision of adequate and reliable electric service to or for the public in the state, and which have *minimal rate impacts*." The electric utility shall demonstrate that the proposed hydrogen energy technology meets the definition provided in s. 377.804(6)." Costs that have received a tax credit are not eligible for cost recovery.

The bill requires the State Fire Marshal to establish uniform fire safety standards applying to hydrogen fueling, storage, and production facilities for stationary fuel cells and vehicles, including maintenance and repair facilities. The bill also authorizes the State Fire Marshal to adopt rules pertaining to or applicable to any building, structure, facility, condition, situation, or circumstance in which hydrogen is being used, produced, or stored, or in any other manner dealt with or treated as a fuel, which the State Fire Marshal finds necessary to protect the public health, safety, and welfare and to protect the safety of persons and property in this state, including, but not limited to, the adoption of the most recent edition of the National Fire Protection Association's NFPA 1 and any other applicable code, publication,

or standard. The State Fire Marshal can also require by rule that any equipment used in conjunction with any use specified in these rules be listed by a nationally recognized testing laboratory, such as Underwriters Laboratories, Inc., or Factory Mutual Laboratories, Inc. The State Fire Marshal can also adopt by rule, procedures to determine whether a laboratory is nationally recognized, taking into account the laboratory's facilities, procedures, use of nationally recognized standards, and any other criteria reasonably calculated to reach an informed determination.

The bill provides a July 1, 2005 effective date.

C. SECTION DIRECTORY:

- Section 1. Creates s. 377.801, F.S., - *Popular name.*
- Section 2. Creates s. 377.802, F.S., - *Legislative findings and intent.*
- Section 3. Creates s. 377.803, F.S., - *Purpose.*
- Section 4. Creates s. 377.804, F.S., - *Definitions.*
- Section 5. Creates s. 377.805, F.S., - *Hydrogen Energy Technologies Grants Program.*
- Section 6. Amends s. 212.08, F.S., - *Sales, rental, use, consumption, distribution, and storage tax; specified exemptions.*
- Section 7. Amends s. 213.053, F.S., - *Confidentiality and information sharing.*
- Section 8. Amends s. 220.02, F.S., - *Legislative intent.*
- Section 9. Creates s. 220.192, F.S., - *Hydrogen energy technologies investment tax credit.*
- Section 10. Amends s. 220.13, F.S., - *“Adjusted federal income” defined.*
- Section 11. Amends s. 366.8255, F.S., - *Environmental cost recovery.*
- Section 12. Amends s. 633.022, F.S., - *Uniform fire safety standards.*
- Section 13. Provides a July 1, 2005 effective date.

II. FISCAL ANALYSIS & ECONOMIC IMPACT STATEMENT

A. FISCAL IMPACT ON STATE GOVERNMENT:

1. Revenues:

Based upon data provided by DEP, the Revenue Estimating Conference has estimated the fiscal impact associated with the sales and use tax exemption for hydro energy technologies and the hydro energy technologies investment tax credit to be \$2.1 million for FY 2005-06 and \$3.2 million for FY 2006-07. The breakdown of the fiscal impact to state government is as follows:

	<u>2005-2006</u>	<u>2006-2007</u>
General Revenue—Sales	(0.1m)	(0.1m)
General Revenue—Corporate	(2.0m)	(3.1m)
State Trust	<u>(insignificant)</u>	<u>(insignificant)</u>
Total State Impact	(2.1m)	(3.2m)

2. Expenditures:

According to DEP and DOR, costs are expected to be minimal. The additional work generated by the grants program, tax incentives, cost recovery, and streamlined safety regulations will be covered by existing staff. No additional staff is necessary at this time.

B. FISCAL IMPACT ON LOCAL GOVERNMENTS:

1. Revenues:

The Revenue Estimating Conference has determined that the sales and use tax exemption for hydro energy technologies will have an insignificant fiscal impact to local governments.

2. Expenditures:

None.

C. DIRECT ECONOMIC IMPACT ON PRIVATE SECTOR:

Incentives

The incentives could stimulate development of hydrogen technology in the state. Matching grants would be available to qualified candidates for demonstration and commercialization projects and for research and development relating to hydrogen energy technologies and electrical grid optimization. Entities receiving these grant funds will be expected to provide matching dollar amounts. The grant program and the tax incentives may be attractive to research and development companies currently doing business in Florida or wanting to relocate to the state.

Environmental Cost Recovery

To the extent that Florida's regulated utilities invest in hydrogen technologies that not only meet the definition of "hydrogen energy technology," but that also have the potential to contribute to the provision of adequate and reliable electric service in the state with minimal rate impacts, the costs of these investments can be passed on to the investing utility's customers through an environmental compliance cost recovery proceeding at the PSC. Florida's citizens could benefit from the bill if improvements in the deployment of hydrogen energy technologies lead to lower overall costs and greater competition when compared to fossil fuel technologies.

D. FISCAL COMMENTS:

The bill does not provide an appropriation to fund the Hydrogen Energy Technology Grants Program; however, HB 1885, 1st Engrossed, the House's General Appropriations Bill contains an appropriation of \$1.2 million from the General Revenue Fund for the grant program.

III. COMMENTS

A. CONSTITUTIONAL ISSUES:

1. Applicability of Municipality/County Mandates Provision:

The mandates provision applies to this bill because it reduces the authority that counties have to raise revenue through local option sales taxes; however, an exemption applies because the reduction is less than \$1.8 million and is therefore insignificant.

2. Other:

None.

B. RULE-MAKING AUTHORITY:

The bill provides rulemaking authority to DEP, DOR, and the State Fire Marshal to adopt policies and procedures to implement the Act.

C. DRAFTING ISSUES OR OTHER COMMENTS:

None.

IV. AMENDMENTS/COMMITTEE SUBSTITUTE & COMBINED BILL CHANGES

On March 29, 2005, the Spaceport & Technology Committee unanimously approved a technical amendment by Representative Hasner.

On April 19, 2005, the State Infrastructure Council unanimously approved two amendments by Representative Hasner. The first amendment provides the Florida Public Service Commission is authorized to approve rates on an experimental or transitional basis for the use of energy from a renewable energy resource. The second amendment was a technical amendment correcting a cross reference which defines "renewable energy resource".