



# CITY OF HUNTINGTON BEACH

## Inter Office Communication

**TO:** Honorable Mayor and City Council Members

**VIA:** Penelope Culbreth-Graft, City Administrator

**FROM:** Paul Emery, Deputy City Administrator  
Ross Cranmer, Director of Building and Safety  
Scott Hess, Director of Planning

**DATE:** July 9, 2007

**SUBJECT: STATUS UPDATE TO ENERGY H-ITEM**

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### Report Overview

On February 20, 2007 the City Council approved H-Item 1A, which set in motion an examination of the City's current status regarding energy use, policy development and response to recent environmental legislation. As approved, the City Council has directed staff to:

*“develop energy policies for the City of Huntington Beach that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect health and safety. Proposed policies would include direct actions the city can take as a consumer and facilities owner, and indirect as a leader in the community to promote energy conservation, renewable energy sources, and green construction methods.”*

This report represents a first step in responding to the H-Item. It examines the City of Huntington Beach's current status in the development of an encompassing policy program, and provides both short and long term preliminary recommendations that address the City's efforts in continuing to provide itself and the community with a more sustainable future.

The report is organized by the following main topics:

- Overview of Green Programs
- State of California Actions
- City of Huntington Beach Existing Efforts and Planned Efforts
- Recommended Actions both short term and long term.

In addition, there are two upcoming City Council Study Sessions (July 16 and August 20) at which there will be presentations about Green Programs, current State actions, Planning Commission recommendations and City efforts.

## **Overview of Green Programs**

With the multi-focus of conservation, reduction in waste and emissions, and health and safety, “Green Programs” have evolved to encompass a broad range of components. Oversight of local programs are primarily managed by California’s public agencies with support coming from consulting firms and non-profit organizations that assist local governments to develop and adopt new development guidelines and sustainable rating systems. Today, most energy conservation and sustainable development programs employed in California cities can be placed in one or more of the following areas:

- Procurement
- Facilities
- Green Building
- Waste Management
- Water Quality and Conservation
- Outreach

The most visible of these programs is the US Green Building Council’s Leadership in Energy and Environmental Design (LEED) program. LEED Green Building Rating System™ is the nationally accepted benchmark for the design, construction, and operation of high performance green commercial and industrial buildings. More specific to residential developments, California-based non-profit organization Build It Green is fast becoming the program of choice for a number of cities in the Southern California area.

Most public agency sustainable practices in California encompass more than green building guidelines. Municipalities include programs involving air and water quality, energy and water conservation, and waste reduction and recycling. Cities have modified their Procurement procedures, improved Waste Management practices and worked to improve Outreach to their residents and businesses to bring awareness and, ultimately, positive change to impact daily operations and the development practices.

Additionally, The U.S. Conference of Mayors has formed a new partnership with ICLEI – Local Governments for Sustainability USA – to reduce greenhouse gas emissions in cities through outreach, education, and technical assistance. Mayor Gil Coerper is currently listed as a participating mayor of the U.S. Mayors Climate Protection Agreement, which aims to meet or beat the Kyoto Protocol targets of a 7% reduction from 1990 emissions levels by 2012 as well as support bipartisan emission reduction legislation.

## **State of California Actions**

Guidance for the current green movement has come from national and grassroots organizations, professional associations and government. The State of California has moved into the forefront as a leader in developing, implementing and supporting initiatives aimed at decreasing the impact of human activity on the environment.

Assembly Bill 32, California’s Global Warming Solutions Act of 2006, “would require the state board to adopt a statewide greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions levels in 1990 to be achieved by 2020, as specified.” Signed into law by Governor Schwarzenegger on September 27, 2006, AB 32 requires the State Air Resources Board (ARB)

to develop a Plan by January 2009 that would achieve the reduced emissions goals and develop regulations for this purpose by 2011.

The ARB is working with California's Climate Action Team, and identified a list of 'discrete early action greenhouse gas reduction measures' in a meeting on June 26, 2007. These measures include ensuring that fuels sold in California meet declining standards, and improving the efficiency of methane capture for municipal landfills. Their next goal is to then adopt regulations per those measures by January 1, 2010.

### **City of Huntington Beach: Existing Efforts**

There are many things the City has done and is doing to become 'green'. The following summarizes actions that the City has completed or are ongoing to conserve energy and protect the environment. The actions are grouped into three main categories: Facilities-Energy Conservation, Waste Management and Recycling, and Water Quality and Conservation.

#### **Facilities-Energy Conservation**

##### **Energy Conservation Measures for City Facilities, 2000-Present**

- Lighting – when work spaces are refurbished or when lighting fixtures are in need of replacement, fixtures are replaced with the most efficient equipment available. (Third Generation T-8's)
- Retrofit Air Distribution System - Replacing the cooling tower with the most efficient equipment - Project underway. HVAC - We use a computer automated control system to maximize efficiency and control when the system runs, limiting the use to when the building is occupied.
- Replace motors - Replacing motors, when failures occur, with the most efficient.
- Chillers City wide - Replace with the most efficient when failures occur or life expectancy is exceeded.
- Rooftop HVAC Units - Replace with high efficiency ratio rated equipment at various locations when life expectancy was exceeded.
- Tankless Water Heaters - Where practical and recovery times can be accomplished, tankless water heaters are installed in place of the traditional canister type water heater
- Cool Roofs - Our roofs are being converted to cool roofs in compliance with Title 24 requirements. The most recent project is the Police building at the Civic Center.
- Upgrade light switches to motion sensor type where applicable
- The City's traffic signals have been upgraded to operate with LED lighting

##### **Energy Conservation Measures for Private Facilities**

- Enforce Title 24, state mandated energy standards, the most stringent in the nation
  - Residential: HVAC systems, lighting, insulation and water heating systems
  - Commercial: building envelope, lighting and mechanical systems

## **Waste Management and Recycling**

### City Actions

- Contract Administration uses a computer recycling program through Dell, Inc.
- All printer cartridges are recycled
- Double-sided copying is encouraged for all forms of reprographics
- Asphalt and concrete spoils are ground up and used for street and trench base materials on other projects.
- Use recycled tire rubber asphalt for our streets. This limits the amount of tires that end up in the landfills and provides numerous benefits such as sound control, and stays black longer which slows oxidation resulting in a longer lasting street.
- During the design of all infrastructure projects, staff evaluates the use of efficient products and designs. This includes using recycled rubber asphalt, efficient pumps, reduced grading and hauling, and recycling materials demolished and removed from the site.
- The City implements rubberized playgrounds at community parks
- Administering a State grant, the City Fire Dept. offers curbside pickup of used motor oil.
- Abandoned hazardous material that is collected from the streets is disposed of by incineration, recycling or fuel blend techniques.
- Hazardous material that is generated by the processes performed here in City functions is disposed of by recycling, fuel blending or incineration.
- Landfills are used as a last recourse, meaning that other processes are not available.
- City Vehicle Fleet (non-safety) Eliminating gross polluters from fleet. Sizing vehicles down to maximum size needed to do the job. Transitioning to hybrids vehicles and alternative fuel vehicles where possible.
- Recycling: Administered through Rainbow Disposal
- Recycled paint use for graffiti abatement
- Recycler PET – plastic lumber used on all site furnishings (park benches, tables, signage at City Hall, bicycle racks)
- Recycle annually two tons scrap metal from vehicle maintenance
- Municipal Tree Trimming Program
  - Private Cuttings go to a certified green waste handler
  - Hold in house cuttings converted to mulch, and reused on city property to assist in water retention which results in less water needed.

### Rainbow Disposal Actions

- Residential Franchise Agreement, 3 can program
  - Recycle batteries
  - Commercial waste process at materials recovery
  - Construction debris separated at their facility
  - One of four facilities/locations in the county for household hazardous waste drop off of Automotive fuels, Paints, Prescriptions, Batteries, E-waste, Household Chemical, Tires
- Waste management vehicle fleet that serves the City is currently being updated with the purchase of new vehicles that operate on compressed natural gas (CNG). 10% fleet converted, with a target completion date late 2008/early 2009.

- Currently all vehicles are equipped with smog and particulate reducing scrubbers integrated into the exhaust systems.

## **Water Quality and Conservation**

### Landscaping

- Central Park - all irrigation served by non-potable water from our own well.
- Sports Complex, Green and Pattinson Parks are equipped with digital controllers and moisture sensing devices that sense the ground moisture, so that irrigation is delivered only as needed.
- As older equipment is replaced, we are using the same type system.

### Water

- Agency recognized as leader for outstanding efforts to reduce electricity use during times of critical demand. Run pumping off peak.
- Constructed dual-fuel capabilities at reservoir booster stations that allow the flexibility to participate in Demand Bidding Programs with SCE that lowers the City's cost of operation and allows the switch from electric driven equipment to natural gas/propane driven equipment.
- Installed Variable frequency drives at two large water well locations that have saved an est. 12% in electrical usage.
- We participate in SCE's "savings by design programs" and have been awarded rebates for our efforts.
- Continue to replace old natural gas engines with new low emission engines.
- Have installed emission control equipment on all water pumping units that are larger than 50 hp.
- We subscribe to SCE's Energy Manager Program that allows the City access to energy usage data, consumption and "what-if" analyses to insure efficient operations for all our larger electric pumping equipment in both water and wastewater.
- Recycled Water  
The Utilities Division is nearing completion of a project that will utilize colored water from one of the City's groundwater wells to irrigate Central Park. Colored water is of high quality, but because of the high color (the water resembles a weak tea) is not suitable for potable use.

### Urban Runoff

- Continue efforts to replace 1960's and 1970's era storm water pumps and motors with current more efficient and cleaner running machinery.
- Staff continues to seek to reduce water runoff (both dry and wet weather flows) into the City drainage system that then needs to be pumped out of our drainage channels. In reducing the quantity of water, the cost and energy needed to run these pumps is reduced. During the development review process, the amount of runoff from developing sites are reduced to mitigate impacts to the storm drain system. Water Quality officers identify illegal runoff and educate businesses and the general public on how to conserve water and reduce runoff.

## City of Huntington Beach: Efforts in Process/Planning Stage

### Energy Conservation Measures

Since 1999, the City has begun to overhaul existing facility equipment and replace units when practical with new, more energy efficient models, as described on the preceding pages. In addition, in August of 2006, the City had an Energy Efficiency Assessment completed for 13 existing Huntington Beach municipal facilities (Attachment No. 1). The Assessment identified 10 Energy Conservation Opportunities (ECOs) to be considered for future improvement of overall energy conservation.

1. Retrofit existing T8/T12 lamps with 3<sup>rd</sup> generation T8 lamps – 07/08 & 08/09 Budgets to complete the transition
2. Integrate Compact Fluorescent Lights - in progress
3. Install energy efficient Hibay T8 bulbs when practical – in progress
4. Install LED exit signs - completed
5. Vending misers to increase efficiency of vending machines – on order
6. Repair compressed air leaks - completed
7. Install energy efficient motors - 07/08 Equipment Replacement Budget
8. Install new lighting for tennis courts and ball fields - 07/08 Budget
9. Install a cool roof - 07/08 CIP
10. Install window tinting – 08/09 Budget

Installation of more energy efficient equipment and upgrades throughout the City's facilities as listed above will save money and further protect the environment. More specifically if all the modifications are accomplished as listed in The Energy Efficiency Assessment, it is estimated that there will be a saving of 1,380,638 KWh and \$177,884 in costs annually. After rebates this would pay back the initial investments in 3 years.

### Planning Commission Green Subcommittee

The Huntington Beach Planning Commission has expressed a strong interest in the topic of sustainability. In 2006, a Planning Commission Subcommittee was formed. Subcommittee members have assembled a significant amount of information to assist in developing a green building program in Huntington Beach, and this report will be presented at a future Council workshop. Based largely on resources available from the Build It Green organization, the Subcommittee Report recommends that the city:

- Form a Green Building Team
- Identify market stakeholders
- Assess City policies and resources
- Develop partnerships
- Define program elements
- Lead by example
- Distribute educational materials
- Offer in-depth training
- Generate press and publicity
- Encourage use of third-party rating programs

For the long-term, the Subcommittee Report recommends:

- Work with the Build It Green Public Agency Council to share information
- Remove internal barriers to Green Building
- Provide additional Green Building services and staff support
- Contribute to Build It Green Materials Database
- Provide incentives

It is anticipated that the Planning Commission will present their recommendations to the City Council at the August Study Session.

### **Recommended Actions: Short Term (Through 2007)**

In addition to the City's ongoing efforts with regard to energy efficiency at its facilities described above, staff recommends the following short-term actions:

#### **A. Create and maintain an informative website**

The development of Huntington Beach's own program should include a website that can provide the general public and industry professionals with information about the city's efforts and programs available to assist them with implementing green policies. It is in the City's best interest at this stage of development to establish a web presence in conjunction with the current web system to indicate commitment and involvement in a sustainable future.

Website to include sections on:

- Green Building – What is Building Green, Guidelines & Checklist on Building Green, Green Building Monthly Tips. Residential: link to forms for tax credits (windows, doors, insulation, tankless water heater)
- Refuse – curbside recycling, CRV program, construction & Demolition Recycling, Used Oil, Household Hazardous Waste, E-Waste, Public Recycling Bins, Recycling at School and at Home
- Water – What is storm water pollution, Water efficient landscaping, Links to Rebate programs available for high efficiency washers, toilets, and dishwashers. Tips for reducing car emissions.
- Energy Savings – Home energy saving upgrades, energy saving tips, Energy Star Appliances, Flex your Power Campaign

#### **B. Offer educational materials to citizenry and builders**

Free literature in the form of handouts, brochures or informative kiosks should be developed and made available to target the general public, architects, designers and builders about available programs and resources. Upon key placement in public agency offices, these materials can expose many people to important information regarding energy conservation, waste reduction and green building without taking time away from other necessary agency functions.

C. Hire a staff person to create a Green Program for the City of Huntington Beach

Staff recommends that the 2007-2008 budget includes a full time project manager to establish and implement the City's program. Additionally, inter-departmental staff involved in the Energy Program can be coordinated to promote and develop additional policies to further enhance each aspect of City's program and outreach efforts.

Long Term (2008 and Beyond)

A. Develop a Green Program

Develop and implement a city-wide Green Program that incorporates recommendations of the Planning Commission Subcommittee, as well as evaluates City procurement policies, facility operations and other opportunities for greening City operations. At this time, it is expected that participation in the Green Program would be voluntary. Existing efforts from other jurisdictions would be evaluated for use in Huntington Beach (Attachment No. 2). The program could also evaluate opportunities for the City to take part in other State and National programs, such as participation in the California Climate Action Registry. Development of a Green Program promotes the City of Huntington Beach as an eco-conscious public agency and also guides public policy and future growth in ways that are sustainable and strengthen the economy. In addition, the City of Huntington Beach should create an advisory subcommittee of professionals from departments with a role in the development and maintenance of an environmental program. This group would meet as necessary to maintain the program as projects evolve and manage updates and communication measures.

B. Continuing Policy Development

Initiate an evaluation of General Plan policies as they pertain to energy, sustainability and Green Building. Evaluation allows the City to look for opportunities to incorporate consideration of sustainable practices in the review of public and private projects.

C. Pursue Grants

More grants are becoming available that will assist the city in program development. A program project manager could pursue available grants to support the on-going program and specific projects.

D. Partner with Businesses/Residential

The program would both promote and help the community in transitioning to a more eco friendly way of doing business. Program would be voluntary and not mandatory. Staff plans on discussing the possibility of enhancing the green aspects of the remaining residential tracts and large commercial developments. This may take the form of improved service and/or the relaxation of some fees associated with the enhancements. The waiver of fees will be specifically addressed in a future study session thus was not part of this report.

In summary, City of Huntington Beach has the opportunity to join a growing group of active public agencies that have devoted time and resources to developing specific programs aimed at preserving the natural environment. Energy consumption, transportation needs, urban development, and health and safety are just a few municipal issues that are connected to our ability to create a sustainable future. Many municipalities across the state of California have designed and implemented new plans, instituted "Green Building" programs and developed specific guidelines in union with existing municipal operations. These measures are used to

decrease amounts of greenhouse gas emissions, conserve energy, reduce waste, promote energy efficiency, protect the health and safety of its citizens, and preserve economic stability.

**Attachments:**

1. City of Huntington Beach Energy Efficiency Assessment, dated August 2006
2. Local Actions – What Other Cities are Doing

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## **Attachment 2: Local Actions – What Other Cities Are Doing**

At the local level, there is a wide variety in approach, effort and experience in implementing green building and sustainability related policies. Build It Green, which promotes education and implementation of sustainable building practices, completed a survey of Southern California jurisdictions in May 2006 detailing the breadth of these local programs (Attachment No. 5). A brief review of some of the more established programs is provided below:

### **City of Irvine:**

Within the Redevelopment Department a budgeted position of Energy Administrator is located. The position is one level lower than a manager function as it has no supervisory responsibilities.

- Procurement
  - Has a Green / Recycled Product Purchasing Policy. The Policy sets forth methods relating to the purchase of recycled and environmentally-preferred products for the City.
- Facilities
  - In a public-private partnership with Pickens Fuel Corporation, Irvine provides compressed natural gas as motor vehicle fuel.
  - The City presently has 35 alternative fueled vehicles in its fleet.
- Green Building
  - Introduced a comprehensive green building program in partnership with Global Green USA.
  - Created certifiable Green Homes, Apartment Homes, and Commercial Building Programs.
  - Green development programs include guidelines, certification checklists, and a green building materials resource guide for commercial and residential development.
- Waste Management
  - Implemented Reduce, Reuse, Recycle Program, which handles hazardous waste, used oil, construction and demolition debris and electronic waste.
- Water Quality and Conservation
  - Irvine Ranch Water District offers rebates for the purchase and installation of energy and water efficient domestic appliances.
- Outreach
  - Designed a comprehensive and easy-to-use Environmental Programs website.
  - Provides information to homeowners, developers, schools businesses and even includes a kid's zone web page with games and environmental information.

### **City of Long Beach:**

Initiated development of a sustainable city program, created a Green Team commission and adopted green building guidelines. The Green Team staff is comprised of 28 active City of Long Beach professionals and operates within the existing annual departmental budget.

- Procurement
  - In 2002, the mayor allocated \$80,000 from the budget to hire Bay Area Economics, an outside consultant to develop an environmental purchasing program.
  - Green Purchasing efforts currently partnered with Office Depot. No official policy at this time, but there is a performance measure for 2007.
- Facilities
  - The City adopted the Green Build Policy, not an ordinance but rather a municipal policy affecting city buildings in accordance with the US Green Building Council's LEED requirements.
  - The first project to reach completion and success was the MacArthur Park Branch Library, and was handled by the Public Works Department.
  - Also created "The Green Team" that met quarterly to continue staff training in LEED requirements.
- Green Building
  - The Green Building Team meets on a quarterly basis to develop and direct the City's Green Building Program.
  - Team members' work together to move forward the City's green building and sustainability efforts, staff knowledge, and green building policy.
- Waste Management
  - Includes interaction with Environmental Services Bureau and the Long Beach Water Department.
  - Extensive Recycling program processes hazardous materials, used motor oil, various paper and recyclable metal products.
  - Green wastes are encouraged to be composted.
- Water Quality and Conservation
  - Long Beach Water Department offers financial incentives for home and business owners to install water efficient appliances.
  - *Beautiful Long Beach* Landscape Grant Program advises public agencies and non-profit organizations how to design demonstration gardens that endorse replacing lawns with innovative landscape techniques and plants that use less water to maintain.
- Outreach
  - Long Beach's recycling website promotes buying recycled products, and offers a free waste reduction guide.
  - Planning & Building website provides access to the Green Building page, which provides links and additional information about the city's program.

City of Pasadena:

The Green City Action Plan is managed by a Senior Project Manager and support staff consisting of one Environmental Planner and additional support staff allocated from other departments. The environmental program budget is embedded within the current municipal structure.

- Procurement:
  - Working on a procurement policy for the 2008 budget, to include recyclable goods (carpet, furniture, and office supplies), chemicals, paints and vehicles.
- Facilities:

- The City of Pasadena owns its own utility provider, Pasadena Water & Power, and plans to provide residents with 10% renewable energy by the year 2010 and 20% by 2017, which satisfies Action One of the Green City Action Plan (described below): to “increase the use of renewable energy to meet 10% of the city’s peak electric load within seven years.”
- Green Building
  - On December 19, 2005, Pasadena City Council approved a green building program, which included three components: green building ordinance, incentives, and outreach and education.
  - The City also created the Environmental Advisory Committee of nine people to advise City Council members on environmental policy matters and provide policy advice for promoting environmental stewardship and urban sustainability.
  - Then on April 15, 2006, Pasadena implemented a green building ordinance affecting both public and private sector developments.
  - Pasadena offers cash rebates for units built to green design specifications.
- Waste Management:
  - In 2004, Pasadena diverted 62% of its waste from landfills through recycling and reuse.
  - This meets the requirements of Action Six of the Green City Action Plan, which sets a goal of reducing, by 25% per capita solid waste, disposal to landfill and incineration within seven years.
  - Pasadena implements additional recycling programs that ensure the goal is continually met.
- Water Quality and Conservation
  - Pasadena Water and Power offers a \$200 rebate for purchasing and installing a high efficiency clothes washer.
  - Residents are also offered an additional \$80 rebate for replacing old toilet fixtures with an ultra low-flow toilet.
  - Free classes are offered to teach residents and professionals how to utilize native California plants and efficient irrigation designs to save water.
- Outreach
  - The City of Pasadena has a well-established website devoted to public outreach and increased awareness about current sustainable activities, future events, green program development, and public participation.
  - Pasadena also offers a series of workshops to increase the commercial sector and general public’s awareness of available green programs.
- Other
  - Pasadena approved and adopted the Green City Action Plan (GCAP) in September of 2006.
    - The GCAP is structured akin to the United Nations Urban Environmental Accords of 2005, and is “a progressive list of environmental initiatives for the City to take in its quest to become a sustainable and green community.”
    - The UN list offers all global cities 21 specific goals to accomplish by World Environment Day 2012. There are three goals each for seven sustainability themed areas: Energy, Waste Reduction,

Urban Design, Urban Nature, Transportation, Environmental Health, and Water.

- At the end of seven years, the UN will recognize those cities that have successfully implemented listed actions from the Accord.

City of Santa Monica:

The Environmental Programs Division (EPD) of the Environment and Public Works Management Department created the Energy and Green Building Program. The EPD currently operates with a 17-person staff and annual budget totaling approximately \$3.8 million.

- Procurement
  - Administrative Instruction for the Purchase of Energy Efficient Office Equipment.
  - Purchase of 100% renewable energy for City facilities.
  - Green Purchasing Group, instituted to raise awareness of available green office products and encourage their purchase.
- Facilities
  - Sustainable City Plan adopted February 2003.
  - Civic Parking Structure in application process for LEED certification.
- Green Building
  - City of Santa Monica Green Building Design and Construction Guidelines
  - Environmental Programs Division staff supports incentives and outreach education initiatives, Green Business Certifications, and a Sustainable City Report Card.
- Waste Management
  - Sunday Farmer's Market is now a 'Zero Waste' event, and with vendor participation, visitors purchase and use only recyclable and biodegradable materials.
  - Solid Waste Management Division provides weekly refuse and recycling collection.
- Water Quality and Conservation
  - SMURRF: Santa Monica Urban Runoff Recycling Facility. Treats dry-weather runoff water and removes sand, oils, grease, trash and debris and kills pathogens with UV radiation.
- Outreach
  - The City features an extensive online public information library.
  - Sustainable City Progress Report measures public awareness of municipal programs and defines areas of success and opportunity.

