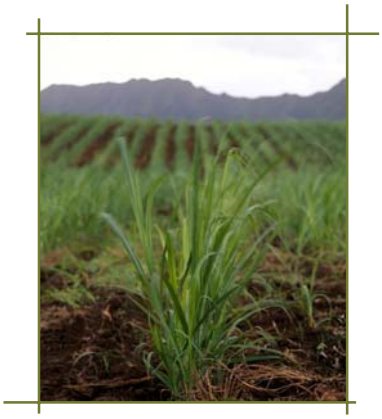
Center for Resource Solutions

2002 - 2003 Annual Report



The Center for Resource Solutions (CRS) makes it easier for people and organizations to use renewable energy. We design and operate national and international programs that support the increased supply and use of renewable energy resources such as wind, solar, biomass, geothermal and low-impact hydroelectric power.

LETTER

FROM THE EXECUTIVE DIRECTOR

In 2002 and 2003, the action was at the state and regional levels, whether in the United States or China. CRS moved to refine its core programs while expanding its work internationally. Working with the Commission for Environmental Cooperation, CRS investigated opportunities for using tradable renewable energy certificates (TRCs) to support new renewable development in Mexico. This investigation further reinforced the need for a coordinated North American renewable TRC accounting system. In this regard, discussions were held with stakeholders in Canada and Mexico as well as the United States to lay the groundwork for collaboration on a North American network of certificate tracking systems.

The China Sustainable Energy Program expanded its focus to include pilot policy projects at the provincial level. Moving from theory to implementation allowed the CRS international team to work directly with Chinese experts tailoring policies and programs to the unique circumstances in Sichuan, Fujian, Beijing and Shanghai. At the same time we began we began working with the central government in the design of a National Renewable Energy Promotion Law.

The Public Renewables Partnership/PIER project finally got underway after a long delay as San Francisco's Hetch Hetchy utility was brought in to replace the previous lead contractor. This exciting research project is already contributing useful information for utility planners as they evaluate the opportunities for adding more renewable resources to their supply portfolios.

The Green-e certification programs in competitive and monopoly markets became consolidated and better integrated as they continued to increase both in numbers of products being offered as well as in the geographic scope of the standards. The diverse list of corporations, governments, universities, and non-profits buying Green-e certified green power expanded with such names as: Nike World Headquarters, Whitewave, University of Pennsylvania, State of New Jersey, State of Maryland, Conservation Law Fund, Good Earth Natural Foods, Lundburg Family Farms, New Leaf Paper, Trium, Tower Property Management, Choice Organic Teas, Interface Fabrics Group, Kinko's, Lowe's Home Improvement, the United States Army, Pitney Bowes, Staples, Brooklyn Brewery, US/DOE and EPA, and the World Bank Group.

After the completion of six successful years, CRS focuses on careful expansion of its range of Programs continuing its market protection and policy development roles in the advancing renewable energy industry. We look forward to this continued growth and productivity in 2004.

Jan Hamrin
Executive Director

Center for RESOURCE SOLUTIONS

GREEN-E RENEWABLE ENERGY CERTIFICATION PROGRAM

Established in 1997, the **Green-e Renewable Energy Certification Program** is the leading voluntary certification and verification program that sets standards for renewable electricity-based products. The program built its reputation by certifying top-quality renewable electricity products offered by competitive marketers and utilities. In 2002, the Green-e Program opened its doors to a new market in renewable energy: Tradable Renewable Certificates (TRCs). This addition reflects the Program's continued ability to adapt to changing market conditions and product innovations. In 2002 and 2003, the Green-e Program experienced a continuous increase in Green-e certified products in restructured, regulated, and national TRC markets, along with a 50% increase in the number of consumers purchasing Green-e certified renewable energy. The Program continued its standard development activity across the country and its work to ensure consumers get what they pay for through the annual verification process.

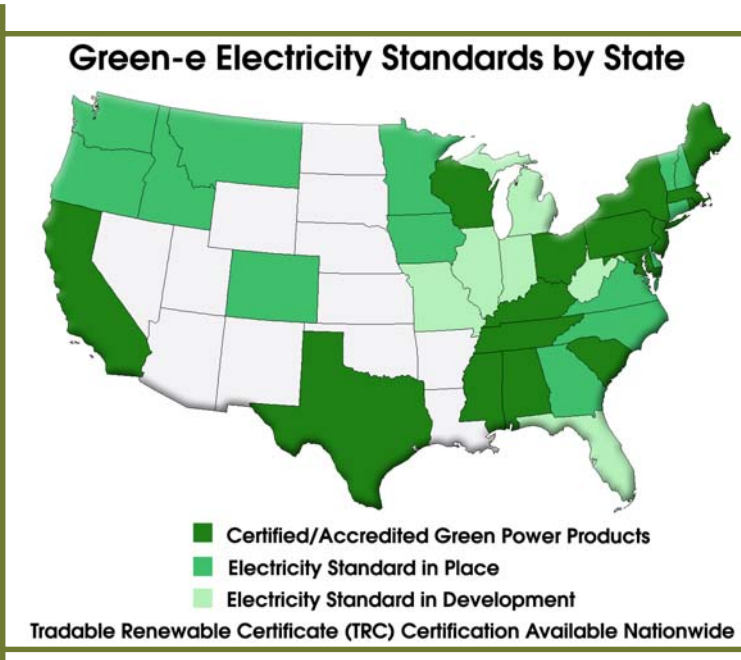
Green-e certified products increased by over 75% with the addition of new renewable energy products

To date, the Green-e National Program certifies 60 green power products offered by 98 renewable energy companies and utilities in 17 states. Green-e has green power standards in place in 30 states, and plans to implement standards in 9 additional states by the end of 2004. In addition, Green-e manages 14 regional and state stakeholder advisory committees.

Green-e sets consumer protection and environmental standards for energy products and verifies that Green-e certified products meet these standards. Energy products that meet the Green-e Standard for environmental excellence are denoted by the Green-e logo. Green-e standards are recognized in numerous federal, state and non- profit programs including: the EPA Green Power Partnership; state procurements for Maryland, and New Jersey; state green marketing incentives for New York, and Rhode Island; LEED Certification standards for the US Green Building Council, and numerous federal and private sector green power RFPs.

Stakeholder Groups Continue to Emerge Across the Nation.

New market development activities during 2002 and 2003 included: successfully developing standards in the Pacific Northwest (Oregon, Washington, Idaho, Montana), North Carolina, South Carolina, Iowa, New York, Minnesota, and Georgia; initiating inclusion of Virginia into the Mid Atlantic standard, continuing criteria development in Florida; and assessing new restructured markets in Illinois and Michigan.



Green-e has active stakeholder groups in 35 states:

Alabama, California, Colorado, Connecticut, Delaware, the District of Columbia, Florida, Georgia, Idaho, Illinois, Iowa, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Montana, New York, New Hampshire, New Jersey, North Carolina, Ohio, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Vermont, Virginia, Washington, and Wisconsin.

The Benefits of Green-e Certified Energy Become Available to Every Consumer in the United States through Tradable Renewable Certificates

In 2002, the Green-e Program developed certification standards for Tradable Renewable Electricity Certificates (TRCs), and now 19 companies offer Green-e certified TRCs. Also known as "Green Tags", TRCs are created when a renewable energy facility generates electricity. Each unique certificate represents the environmental benefits of 100% new renewable generation and is sold separately from the electricity. When a customer buys a TRC product, they buy the benefit of displacing non-renewable power sources such as oil, gas and nuclear from the national or regional grid.

The Competitive Market for Green-e Certified Products Expands

The core activities of the Green-e Program continue to grow in terms of the number of certified competitive electricity products. In 2002 and 2003, Green-e certified 17 new electricity products offered in six different states. Green-e currently certifies 38 electricity products offered by 9 different providers in restructured states: New York, Texas, Ohio, Pennsylvania, New Jersey, California, Rhode Island, Maine and Massachusetts. Restructuring occurs when a monopoly electricity territory controlled by a single utility is opened up to competition.

Building Consumer Confidence and Demand

Increasing Awareness About Renewable Energy

Green-e Announces New Initiative to Place Logo on Consumer Products

From beer and yogurt to fabrics, coffees, and teas, several companies selling consumer products purchase significant amounts of certified renewable energy for their headquarters and factories. At the 8th National Green Power Marketing Conference, held in November of 2003, Green-e announced the launch a new initiative to place the Green-e logo on packages of consumer products manufactured by companies purchasing qualifying amounts of certified renewable energy. Many businesses have already applied for authorized use of the Green-e logo, including White Wave (Silk brand soy milk products), Interface Fabrics Group, Choice Organic Teas, and Lundberg Family Farms (rice). The "Made with Renewable Energy" Product Labeling Initiative begins work to bring the Green-e Logo to consumer products the first quarter of 2004.

More Utilities Offer Accredited Green Pricing Programs

The Green-e Green Pricing Accreditation Initiative recognizes best-practice green power programs offered by monopoly utilities in regulated markets. During 2002 and 2003, the Program accredited new green pricing products offered by three utilities in regulated markets: Santee Cooper, City of Palo Alto Utilities and Wisconsin Public Service. Since April 2000, the Green Pricing Accreditation Board has accredited seven green pricing programs, including six currently accredited. The accreditation process ensures that products meet the Green-e standard, including verifying that mandated renewables are not a part of green pricing.

Green-e Amplifies its Outreach

The comprehensive outreach goal for the Green-e Program is to create widespread recognition of the Green-e logo, to create confidence in renewable-based electricity products, and to ensure green power market success. In 2002, Green-e began circulating "The Green-e News," a bi-monthly newsletter with Program highlights and events. By the end of 2003, newsletter distribution doubled to several thousand subscribers. The Green-e website, www.green-e.org, experienced a large boost in unique visitors, reaching up to 10,000 monthly. The Program also spread renewable energy information through Earth Day outreach, and the distribution of Green-e materials to grassroots organizations and companies in over 15 states.

Green-e co-organized several conferences and events reaching industry members, the business community and residential consumers. Major Green-e conferences and events included the: Mid Atlantic Green Power Procurement Workshop, the Wisconsin Green Power Workshop, and the Rhode Island Green Power Campaign. Green-e staff also exhibited and spoke at approximately 70 events in the green power industry in 2002 and 2003.

Tradable Renewable Certificates

CRS was the first public interest group to identify the consumer protection issues surrounding the use of tradable renewable certificates (TRCs). Since then, CRS has developed numerous documents providing recommendations for the development of voluntary market rules to ensure consumer confidence and to prevent market abuse. In addition, CRS is involved with national and international efforts to design and develop renewable certificate tracking and accounting systems for both voluntary and mandatory markets.

CRS Serves as a Technical Expert on Certificate Trading Regimes:

Plan Developed for a New York Regional Environmental Attribute Certificate Trading System

CRS developed a business plan for a regional environmental attribute certificate accounting and trading system for the State of New York. The purpose of the system is to facilitate the unique sale and purchase of environmental attributes associated with energy sold and purchased through the NY spot market and energy transacted between NYISO and neighboring systems. The system would also track and verify compliance with the State's Renewable Portfolio Standard and verify green product claims. The New York State Energy Research and Development Authority funded this project.

National Effort Underway on North American Association of Issuing Bodies

CRS provided analysis to NREL on the formation of a coordinated system of North American renewable certificate tracking and accounting entities. The resultant paper and an accompanying stakeholder meeting, was the first effort to organize the US renewable certificate market by creating a national network of certificate tracking systems. This initial effort was the catalyst propelling the formation of a North American Association of Issuing Bodies (NAAIB). The overarching goal of this new institution is to facilitate the creation of the minimum standards and protocols that ensure compatibility between systems issuing and tracking renewable certificates in North America. In addition, NAAIB will coordinate with GHG registries to integrate TRC and carbon markets and avoid double counting. CRS has three funders for this project, US EPA, the Commission for Environmental Cooperation, and the Oak Foundation.

Delivering Valuable information Resources

CRS Produces Key Publications on Tradable Renewable Certificates

New Handbook for Regulators on TRCs and their Role in Electricity Markets

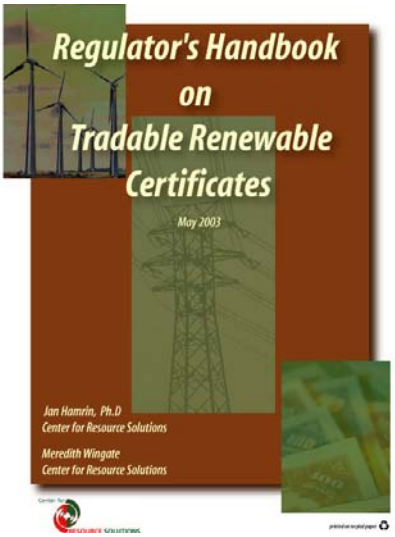
CRS authored a handbook to help educate regulators and other decision makers on new developments in the burgeoning renewable certificate market. *The Regulators' Handbook on Tradable Renewable Certificates* contains "best practice" recommendations that relate to the intersection of renewable policy and renewable certificate markets, including state mandated renewable programs, green pricing, net-metering, environmental labeling and GHG registries. Based on this handbook, CRS also conducts regional workshops for regulators on specific issues related to the intersection of renewable energy regulation and TRCs.

Issue Brief on Tracking Systems

CRS wrote an issue brief for the NWCC on the major issues and challenges that impact the development of renewable certificate tracking systems, and the characteristics of the most functional tracking systems.

CRS Examines the Potential for TRCs to Encourage Renewable Energy Development in Mexico

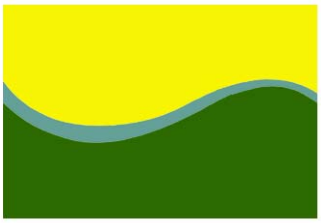
In June 2003, CRS authored a paper examining the technical, legal and economic issues involved in developing a North American market for tradable renewable energy certificates from Mexico. The publication, *The Potential for Using a Renewable Certificate System to Encourage Renewable Energy Development in Mexico*, assesses both the feasibility of using TRCs to encourage the development of renewable energy in Mexico, and the challenges and opportunities associated with building a North American certificate-trading scheme.



Survey and Report on Western Tracking System Needs

CRS also received funding from the Western Governors' Association to supplement funds provided by the CA Energy Commission for a major survey and development of a report on the functional requirements and needs for a Western renewable energy tracking system, known as WREGIS. CRS is now in the process of developing the design and implementation of this system that will cover the eleven Western states, two Canadian provinces, and Northern Mexico.

Public Renewables Partnership



Public Renewables Partnership

CRS Launches New Public Renewables Partnership:

In 2002, CRS began the Public Renewables Partnership (PRP), an initiative dedicated to enabling public organizations and cooperatives to effectively integrate renewable energy into their power portfolios and business strategies. The Partnership, administered by the Center for Resource Solutions (CRS), receives leadership and support from the Western Area Power Administration. The National Renewable Energy Laboratory (NREL), Sandia and Lawrence Berkeley National Laboratories provide technical assistance; and the California Energy Commission (CEC), Hetch Hetchy Water and Power, the Department of Energy, the American Public Power Association, the US Forest Service, and Bonneville Power Administration provide development assistance.

PRP's activities are developed by and for its members in the public sector. They encompass evaluation, analysis, planning and other upstream activities for renewable energy developments. PRP's mission is to assist its members to prepare for downstream activities, such as construction, operation & maintenance, or power purchasing. Although PRP does not buy or sell power, or develop new generation itself, it provides value to its members through quality information and knowledge.

PRP's offerings are organized into four service areas:

1. **Evaluation** of renewable energy resources and projects, potential availability of renewables, end-customer needs;
2. **Economic Services**, for example, in green pricing, risks, portfolio analysis & design;
3. **Acquisition** (buying or building renewables), including R&D, resource planning, leveraging government resources, purchase assistance, improving access to new technologies;
4. **Constituent Relations**: providing assistance in educating and communicating to customers and other stakeholders.

Major, ongoing initiatives include the PRP Technical Workshops, PRP Green Pricing Initiative**,** the PRP Tradable Renewable Energy Certificates (TRC) Initiative, and the Public Interest Energy Research (PIER) Program. In 2003-2004, PRP will be developing Outreach, Communication and Training Initiatives that yield reports, websites resources, workshops and trainings that are implemented throughout the state of California and with public power entities in regions across the nation.

Technical Workshops:

The Center for Resource Solutions, in partnership with GeothermEx, developed and implemented a series of geothermal Workshops for California public utilities. The overall work included development of workshop curricula and presentation materials, soliciting broad participation in the Workshops, and technical and administrative implementation of two initial workshops. This work provided resources that enable education (through subsequent workshops or alternative outreach) of a broad spectrum of PRP members and stakeholders.

THE PIER PROGRAM

Public Interest in Energy Research (PIER) Program

In July of 2002, the California Energy Commission awarded a contract of $5.9 million to the City of San Francisco through its Public Interest Energy Research (PIER) program, to conduct a series of projects for the Public Renewables Partnership (PRP) to evaluate renewable energy options for the state of California over a three-year period. There are eleven projects directly managed by CRS that fall under the program's overall program management and technical project integration, and nine technical projects addressing specific renewable energy research topics.

Three major goals of the PIER Program are to:

- Improve the near-term cost effectiveness and value of renewable energy as a significant component of a resource portfolio,
- Advance the development of cutting-edge renewable technologies to expand the availability of renewable options in the longer term; and
- Support the application of renewable energy sources in distributed generation applications to increase grid reliability, reduce transmission and distribution upgrade costs, meet peak demand and reduce transmission congestion, and satisfy customer needs.

A significant part of CRS's role is to ensure the relevance of the technical projects to public power in California and that the projects lead to the increased use of renewables. The nine technical projects are divided into two groups – bulk power and distributed generation. Projects primarily address transmission challenges in the integration of significantly greater amounts of bulk renewables into the California grid and developing a replicable method to identify the best locations for renewable distributed generation in local utility distribution systems.

This research and development work is aimed at identifying issues and resource options useful for participating utilities and market participants. PIER efforts will evaluate development issues and opportunities for renewable energy in conjunction with transmission development and focus on the pursuit of large, compelling new transmission options for major renewable energy expansion.

PRP Web Site

In 2003, the Western Area Power Administration, with support from CRS, launched a web site (repartners.org) dedicated to renewable energy information and data aimed at supporting public utility deployment of renewable energy.

CHINA SUSTAINABLE ENERGY PROGRAM

The CRS China Renewable Energy Program continues to influence renewable energy policy in China

In 2002 an 2003, CRS worked directly with Chinese government officials at the provincial and national level to encourage policies that support new renewable development in China. CRS work focused on encouraging investments in renewable energy and creating a more positive market structure for renewable development. Additional efforts included expert assistance on China's proposed renewable energy law and Public Benefit Fund, and advancing Green Pricing in Beijing.

Launch of First Green Pricing Program in Beijing

In January 2002, CRS organized an eighteen-day study tour for two staff at the South-North Institute for Sustainable Development (SNISD). The focus of the study tour was green power marketing, green power certification and verification, and stakeholder meetings. The SNISD integrated lessons learned during their US study tour, and is now working in consultation with CRS to launch China's first green pricing program in Beijing. In the future, we will also work with The World Bank and the city of Shanghai on a similar program.

National and Provincial Renewable Policy Assistance

CRS provided research and policy assistance to the national State Development and Reform Commission (NDRC, formerly SDPC) and four provincial planning and development agencies (Beijing, Sichuan, Fujian, and Guangdong). CRS executed trainings at seven national and provincial workshops on renewable policy and authored four papers related to the international experience in implementing renewable energy policies. In 2003, CRS also published a major document on International Experience with Public Benefit Funds being used for both renewable energy and energy efficiency promotion.

CRS continues to meet regularly with staff at both the provincial and national level to provide assistance on projects related to mandatory market share (similar to US Renewable Portfolio Standard), public benefits funds, tendering policies, wind concession projects, power purchase agreements, and provide training and guidance on other projects related to renewable energy, energy efficiency, renewable technology, and utility deregulation. In addition, CRS gave a successful presentation in 2003 before the National People's Congress and worked behind the scenes with Chinese experts on the outline and content of a proposed renewable energy law.

International Conference on Renewable Energy Policy

In July 2002, CRS, along with the CSEP Beijing staff, organized an international

conference on renewable policy to educate high-level Chinese Central Government officials. CRS convened 20 international experts from Europe, Japan, India, Australia, and the US to discuss the latest experience with renewable energy policy. CRS gave five talks during this two-day session, covering international renewable policy overview, public benefits funds, design and power purchase agreements, interaction between green markets and renewable policy. This conference was very important for introducing the new SDRC Renewable Director to international renewable energy policy experience

CRS Advances Off-Grid Renewable Energy Development

CRS worked with the Chinese Association of Rural Energy (CERS) on the advancement of distributed renewable energy resources and the creation of mini-grids in western China. CRS authored three papers on off-grid renewable energy policy issues to support the CERS Team, including, *Financing Off-grid PV*, *International Experience with Non-Grid PV Projects*, and *Certification of Off-Grid PV Systems.*

Other International Initiatives

G-8 Renewable Energy Task Force Advisory Committee

Jan Hamrin served on the Advisory Committee for the G-8 Renewable Energy Task Force and provided expert assistance to the IEA/Task Force Staff in the development of an action agenda for G-8 consideration to support greater development of renewable energy (both grid connected and non-grid renewables) in both developed and developing countries.

Policy Assistance to the Commission for Environmental Cooperation

CRS worked with Canadian renewable energy stakeholders to consider opportunities for the use of renewable energy certificates (TRC) and other mechanisms for international markets that are developing in support of renewable energy. CRS also investigated financial and legal options for using TRCs in Mexico in a report for the CEC entitled *The Potential for Using a Renewable Certificate System to Encourage Renewable Energy Development in Mexico.*

Policy Advisor to Winrock for Project in Mexico

Over the past five years CRS has participated in a series of meetings with Mexican government officials investigating how Green Power Markets operate in the United States, best practices for Green Pricing programs and other types of renewable policy options that could be considered in Mexico to stimulate greater use of renewables.

World Sustainable Energy Conference 2002

Jan Hamrin was a keynote speaker at the World Sustainable Energy Conference in Wels, Austria. She presented a paper on The US Green Electricity Market: Policies and Programs.

International Energy Agency, Renewable Energy Guidelines for Restructured Electricity Markets

CRS authored a white paper on guidelines for utility companies undergoing privatization/ liberalization to ensure momentum incorporating renewable energy into the electricity mix is not lost in the process. The paper was presented at an IEA workshop in May 2002.

Analysis on the Use of Renewable Certificates as a Development Mechanism in Mexico

In 2002, CRS investigated the feasibility of building an integrated North American market for tradable renewable energy certificates (TRCs). This project, funded by the North American Commission for Environmental Cooperation (NAFEC), reviewed the feasibility of using TRCs to increase new renewable development in Mexico. CRS assessed the technical, legal and economic issues and provided recommendations for certificate trade in North America. CRS also identified the barriers to selling Mexican TRCs in a US market. This project started in 2002 and continued into 2003.

CRS Finances

Statement of Financial Activity: Year Ending December 31 2002*

	Unrestricted	Temporarily Restricted	2002 Total
Revenue and Support			
Government Contracts	$ 561,233		$ 561,233
Fees	$ 489,385		$ 489,385
Grants		$ 526,000	$ 526,000
Interest	$ 713		$ 713
Net Assets Released from Restriction	$ 352,046	$ (352,046)	
Total Revenue and Support	$ 1,403,377	$ (173,954)	$ 1,577,331
Expenses			
Program Services	$ 1,290,609		$ 1,290,609
General and Administrative	$ 271,267		$ 271,267
Fundraising	$ 33,780		$ 33,780
Total Expenses	$ 1,595,656		$ 1,595,656
Change in Net Assets	$ (192,279)	$ (173,954)	$ (18,325)
Net Assets, Beginning of Year			
Balance at Beginning of Year, as Restated	$ (138,531)	$ 294,104	$ 155,573
Net Assets, End of Year	**$ (330,810)**	**$ 468,058**	**$ 137,248**

*Financial Activity Report for 2003 available Spring 2004

Main Contributors

American Public Power Association (APPA/DEED)

California Energy Commission

California Institute for Energy Efficiency

Commission for Environmental Cooperation (NAFEC)

Energy Foundation

Joyce Foundation

National Wind Coordinating Committee (NWCC)

New York State Energy Research and Development Authority (NYSERDA)

North American Fund for Environmental Cooperation (NAFEC)

Pennsylvania Sustainable Development Fund

Oak Foundation

Rhode Island Renewable Energy Fund

State of Nevada Energy Office

Surdna Foundation

Turner Foundation

US EPA

Western Governors Association

Western Area Power Administration (WAPA)

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