

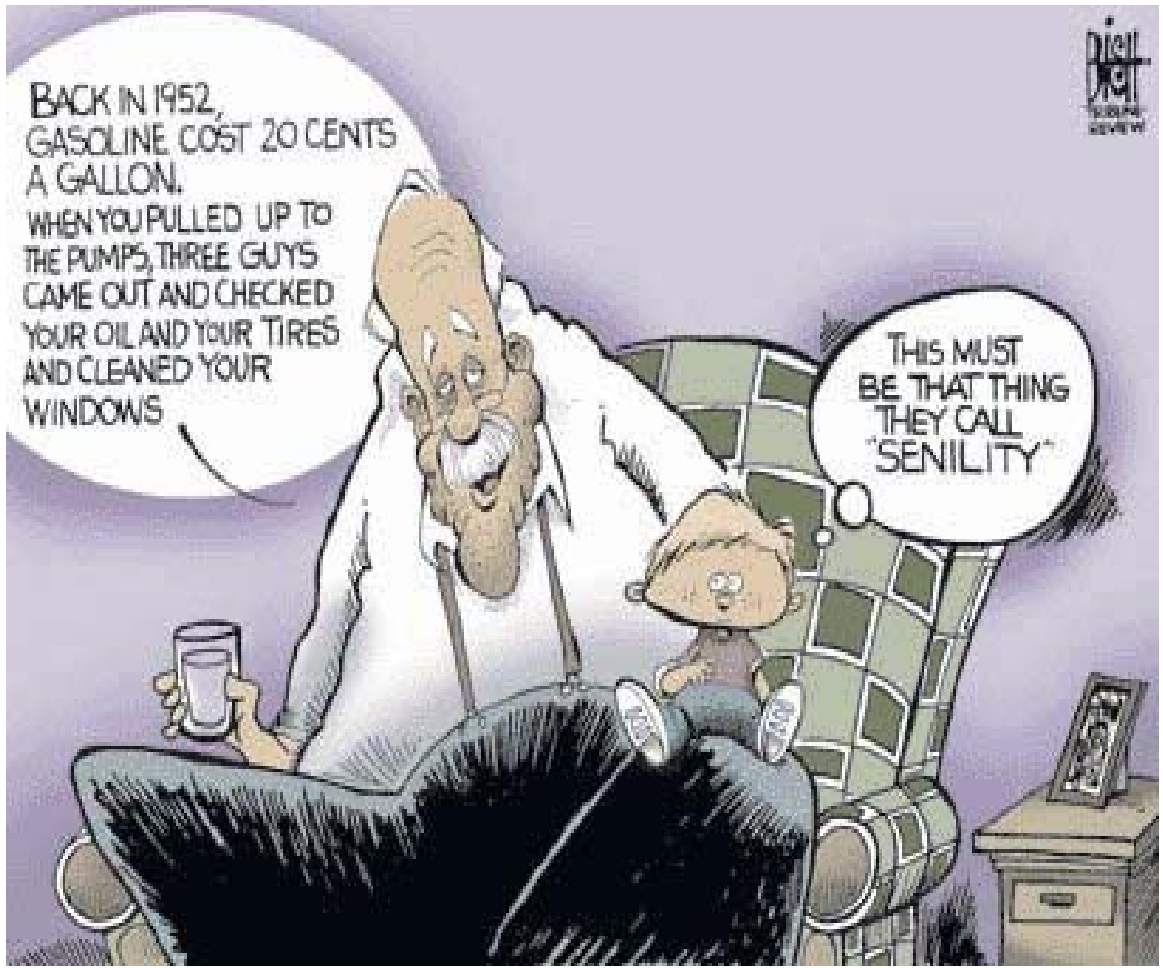


Apollo Alliance

Good Jobs in the **Green** Economy

BeniciaFirst! Forum

**Benicia, CA
June 24, 2008, 2008**



BACK IN 1952,
GASOLINE COST 20 CENTS
A GALLON.
WHEN YOU PULLED UP TO
THE PUMPS, THREE GUYS
CAME OUT AND CHECKED
YOUR OIL AND YOUR TIRES
AND CLEANED YOUR
WINDOWS

THIS MUST
BE THAT THING
THEY CALL
"SENILITY"

DASH
DOT
TODAY'S
REVIEW

The Apollo Alliance

Apollo Alliance is working toward greater energy independence by:

- **Boosting clean energy industries & related businesses.**
- **Creating high quality jobs in modern energy technologies**
- **Increasing public and private investments in alternative energy.**
- **Revitalizing communities.**



The Apollo Alliance

- **Business Leaders-** Sharp Solar, American Council On Renewable Energy (ACORE), Bright Source Energy, American Wind Energy Association, Vantage Point Venture Partners.
- **Environmental Groups-** Sierra Club, Union of Concerned Scientists, NRDC, National Wildlife Federation.
- **Major Labor Unions (AFL-CIO, IBEW, IBT, AFSCME, UAW, LIUNA, UMWA, SMWIA)** representing over 10 Million Working Men and Women.
- **Social Justice Groups-** AGENDA, Ella Baker Center for Human Rights and Urban Habitat.



A Ten-Point Plan

FOR AMERICA'S ENERGY INDEPENDENCE BY 2015

- 1 Promote Advanced Technology & Hybrid Cars**
- 2 Invest In More Efficient Factories**
- 3 Encourage High Performance Building**
- 4 Increase Use of Energy Efficient Appliances**
- 5 Modernize Electrical Infrastructure**
- 6 Expand Renewable Energy Development**
- 7 Improve Transportation Options**
- 8 Reinvest In Smart Urban Growth**
- 9 Plan For A Hydrogen Future**
- 10 Preserve Regulatory Protections**

www.apolloalliance.org

The Time is Ripe

- **States**- taking initiative on alternative energy policy where the federal government falls short.
- **Workers**- declining living standards, rising inequality, & the loss of high quality jobs, including 20%, or 340,000 manufacturing jobs in CA, 5 year period.
- **Environmental** groups- seeking to collaborate with labor to curb greenhouse gas emissions.
- **Communities**- interested in clean and affordable energy, reinvestments in urban infrastructure & jobs.

AB 32 Implementation



Reuters / Kimberly White

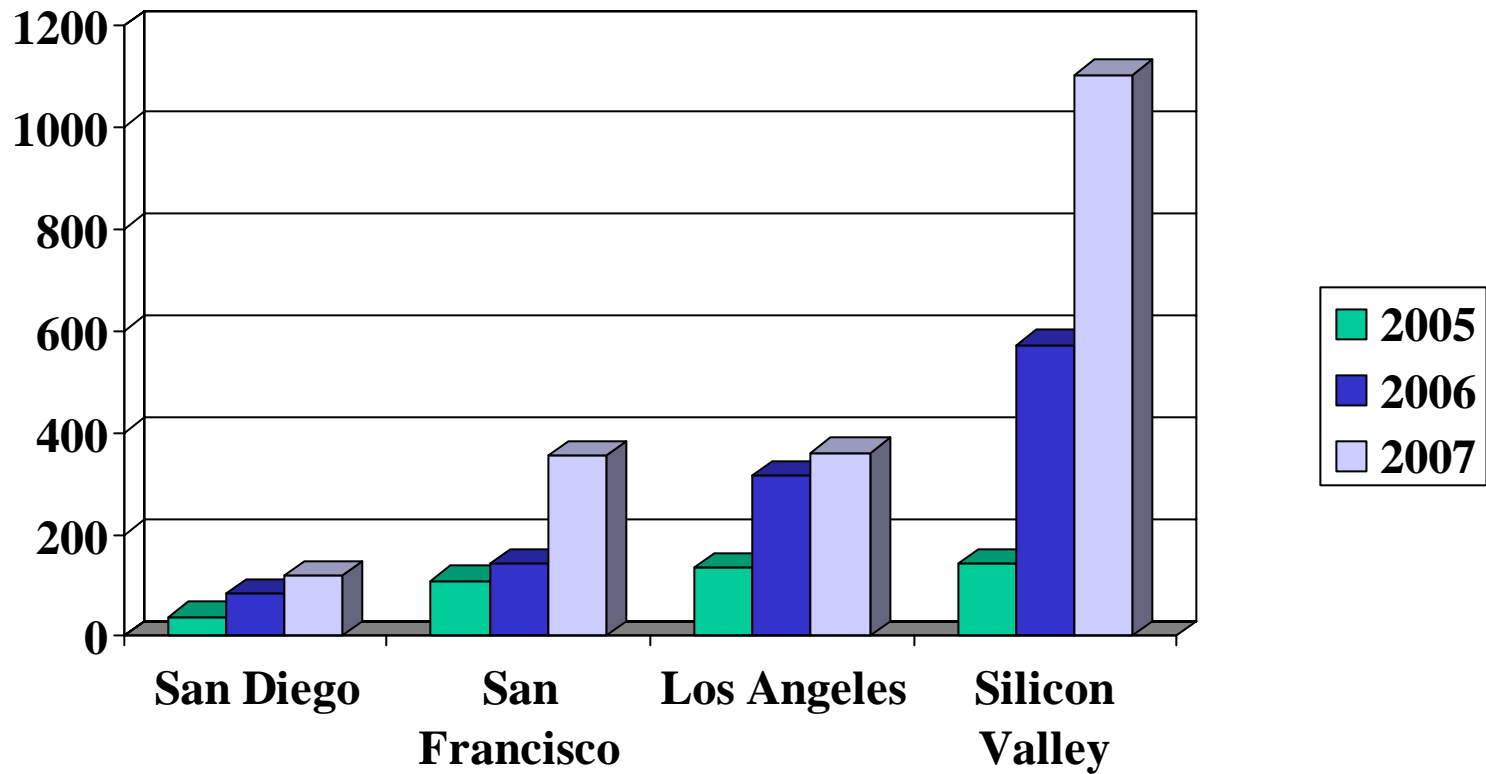
- Requires CA's global warming emissions to reach 1990 levels by 2020.
- Promotes economic development & job creation.
- Will require retooling of high emitting sectors and skills upgrading.

Venture Capital Investments in Clean Technology



- \$3.04 billion globally, 83 % of that in the U.S.
- Nationally- \$2.5 billion in 2007, up 48% from 2006, 79% from 2005.
- **Hottest** area for investment- **Solar Energy**- \$700 million for 27 deals (transportation, biofuels next).
- In CA, \$475 million in 2005 to \$1.785 billion 2007.
- Top growth areas in CA- renewable energy generation, transportation, energy efficiency.

VC Investment by CA Region



California's **Green** Businesses by Industry Sector

- **Professional, Scientific & Technical Services 36%**
- **Construction 19%**
- **Manufacturing 15%**
- **Wholesale & Retail 18%**

Benefits of **Green** Industry Cluster

- **Magnet for other clean businesses after main facility is anchored.**
- **Contributes to local economy (multiplier effect, local tax base).**
- **Positive effect on public health, education, environment.**
- **High quality jobs at different skill levels.**
- **Local pride.**

Solar PV Market Drivers

- State Rebates and Incentive Programs
 - SB1 / 2006 Million Solar Roofs Program- \$3.3 Billion to develop 3,000 MW by 2017.
 - PV Rebates / Incentives in 39 States
 - Federal Investment Tax Credits & Accelerated Depreciation Nationwide
 - Net Metering in 42 States + DC
- California Global Warming Solutions Act of 2006
- Rising Cost of Energy
- National Security Concerns

Green Industrial Attraction

Government
Incentives

Regulatory
Mandates

Market
Certainty

Access to \$\$
Capital

Access to
Industrial Land

Skilled
Workforce

Access to
Transport

Expedited
Permitting

Academic
Partners

High Skilled - High Quality Jobs Cleantech Sectors

- **Need highly trained workers in modern energy technologies.**
- **Need lifelong learning and apprenticeship-training models.**
- **Programs can provide a bridge between underserved communities and high-quality, high-wage jobs.**
- **Dollars stay at home- jobs cannot be outsourced.**
- **Activities are across the entire economy in cleantech.**

Jobs in Energy Efficiency

- **Energy Efficiency measures create 8-14 jobs for every \$1 million investment.**
- **Diverse Fields- HVAC/refrigeration, lighting, glazing, roofing, carpentry, masonry, construction, general labor.**
- **Even with a downturn in the housing market, demand for trained workers exceeds available supply (NAHB 4/07).**
- **Based on a NAHB survey of home builders, between 40% - 50% of the homes built in 2010 are expected to contain 3 of 5 green elements (NAHB 4/07).**
- **CPUC plans for all new commercial developments to be zero-net-energy by 2030; and all new residential by 2020.**

Jobs in Solar



Major jobs include:

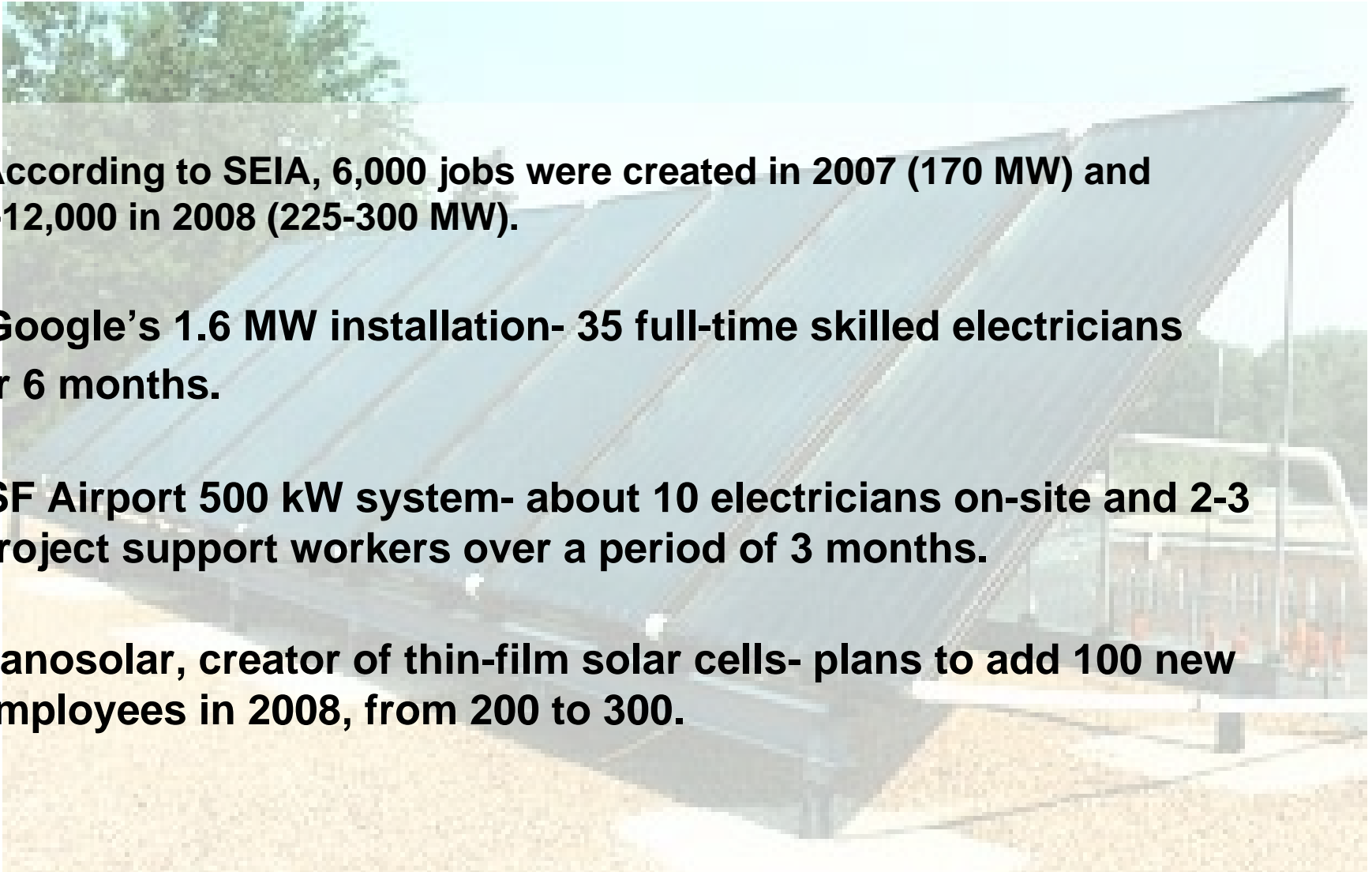
- Module assembly
- System integration
- Mounting & framing
- Installation
- Project management
- Contracting, sales, marketing, customer support
- Possibly in-state manufacturing



Solar Energy & Job Creation



- According to SEIA, 6,000 jobs were created in 2007 (170 MW) and 9-12,000 in 2008 (225-300 MW).
- Google's 1.6 MW installation- 35 full-time skilled electricians for 6 months.
- SF Airport 500 kW system- about 10 electricians on-site and 2-3 project support workers over a period of 3 months.
- Nanosolar, creator of thin-film solar cells- plans to add 100 new employees in 2008, from 200 to 300.



SB 1672 (Steinberg)

Renewable Energy, Climate Change, Career Technical Education, & Clean Tech Job Creation Bond Act of 201__.



- Focus on reducing high school dropout rate, career technical education, green training & meeting AB 32 goals.

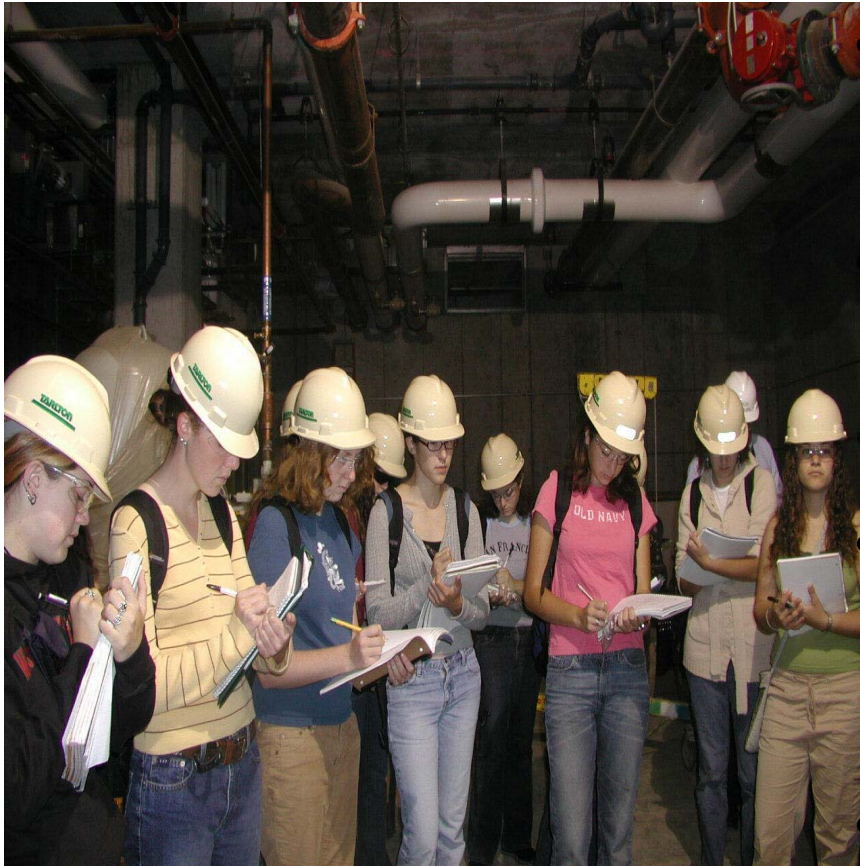
- \$1.25 billion:

- Career Technical Education
- New construction, retrofitting

- \$1 billion Revolving loan fund:

- Capital outlay projects
- Business, labor, CBO's tied to CTE

CA Partnership Academies Legislation AB 2855



- 285 career technical high school programs in State

- Designates Green Building & Goods Movement Categories

- Links graduates to apprenticeship & training programs

- Responds to need for skilled workforce

\$120 million/year Clean Fuel Account- AB118

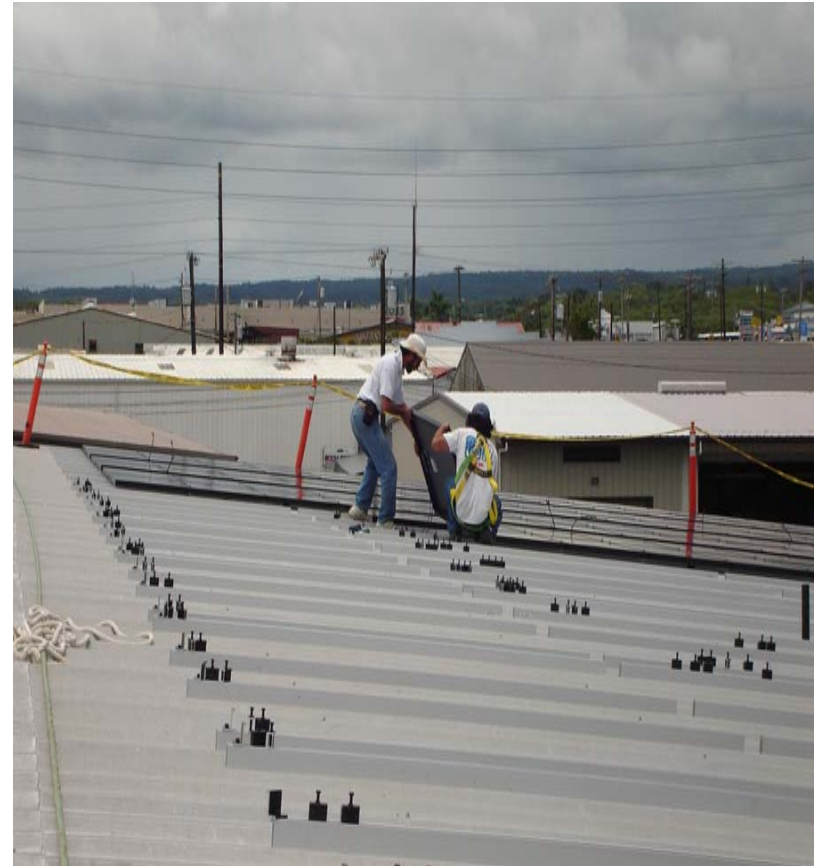
- Supports clean alternative fuels & vehicles.
- Commercialization
- R&D
- Workforce Training Programs
- Advisory Body includes labor representative.



AB2267 (Fuentes)

Green job creation & economic benefits

- Priority given to projects that result in job creation & economic development in California.
- CPUC, CARB, CA Energy Commission incentive programs- energy efficiency, renewable energy & reduction of GHG emissions.







Contact:

Carla Din

Western Regional Director

din@apolloalliance.org

(510) 336-3311

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