

GABRIELE GHINI, PARTNER
HEIDRICK & STRUGGLES

RICCARDO BALLESEO, DIRECTOR
ANGELINA DI IORO, RESEARCH CENTRE
SAFE - ENERGY RESOURCES AND ENVIRONMENTAL SUSTAINABILITY

Emergency talent: a barrier to new energy challenges

“Energy challenges: what is the proper balance between new talent, technologies and financial crises?”, this is the title of the workshop organised by Safe – Energy Resources and Environmental Sustainability in collaboration with Ministry of the Environment and the United States Embassy in Rome, on the occasion of the conclusion of the 9th edition of its Master in Management of Energy Resources. The Ceremony took place in Rome at Villa Monte Mario, an elegant and noble antique residence. The event was characterized by an informal and cordial atmosphere. Mr Raffaele Chiulli, President Safe, citing Plato’s “Metaphor of the sun”, recalled that current difficult times for the economy are somehow due to a financial system based on perception rather than on reality. Mr Corrado Clini, Director General of Ministry of the Environment, underlined the need to redirect investment on new technologies in order to face rising energy demand, while Mr Tom Delare, Minister Counselor for Economic Affairs at the United States Embassy in Rome, believes that identifying a common way to deal successfully with the difficult economic challenges, is more than crucial today. So it is very important the availability of specialized professionals capable of bringing crucial technological innovations out of the laboratories and into the marketplace.

Mr Adriano Piglia, Safe Research Centre Manager, wisely recalled that talent means not just having knowledge and skills but, above all, distinguishing oneself in ethical conduct and spirit of responsibility. The event was also attended by representatives of: AceaElectrabel; AITEC; Alstom; Atel; BKW Italia; Degremont; EDF; Edipower; Edison; EGL; Electrabel Italia SIM; Endesa; Enel; Energy Coal; Eon; Ergon Energia; Exxon Mobil; General Electric Oil & Gas; Italtrading; Saras; Sorgenia; Terna; Warstila.

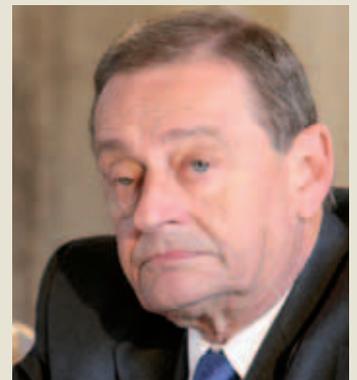
During the event has been presented "The War for Talent" a research about the complexity for clean energy sector, to find out top level talents able to face those big challenges the sector is going through. Businesses in the vanguard of the clean energy investment surge are running into a number of bottlenecks. The most obvious are for specialist pieces of hardware such as wind turbine gearboxes and solar grade silicon. However there is also a growing shortage of experienced human capital. This research note is based on the results of a ground-breaking survey of top decision makers in the clean energy sector. Here's a summary of the research.

We are able to draw the following conclusions:

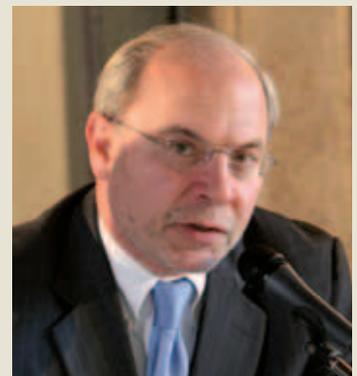
- The overwhelming majority of top executives in the clean energy sector



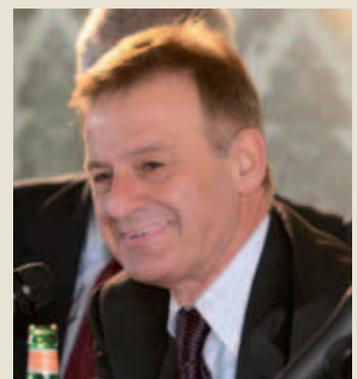
Raffaele Chiulli (President - Safe)



Adriano Piglia (Research Centre Manager - Safe)



Tom Delare (Minister Counselor for Economic Affairs - United States Embassy in Rome)



Corrado Clini (Director General - Ministry of the Environmental)

believe that finding talent to fill key roles in their companies is becoming a serious challenge (96%).

- Many firms rate the “war for talent” as more pressing than the quest for project finance, project sites or government support.
- Two of the most serious shortages are for experienced, entrepreneurial chief executives; and for chief technical officers. Senior project manager is a third role where recruitment is proving a challenge.
- In terms of skills, the number one dearth is for experienced senior management. Other skills in short supply are investment management with deep sector experience, energy sector expertise, project management, and specialised engineering.

THE WAR FOR TALENT SURVEY

During February and March 2008, New Energy Finance and Heidrick & Struggles, carried out a detailed survey of decision makers in the clean energy sector. Entitled the “War for Talent” the survey consisted of 18 questions about the recruitment issue. Responses were collected from high level executives in the sector worldwide – our definition was “those who make the investment and hiring decisions”. In small companies, this will generally have been board directors, in large, diversified corporations; it will have been the senior managers responsible for clean energy activities.

By 31 March 2008, the survey had collected responses from 75 top executives

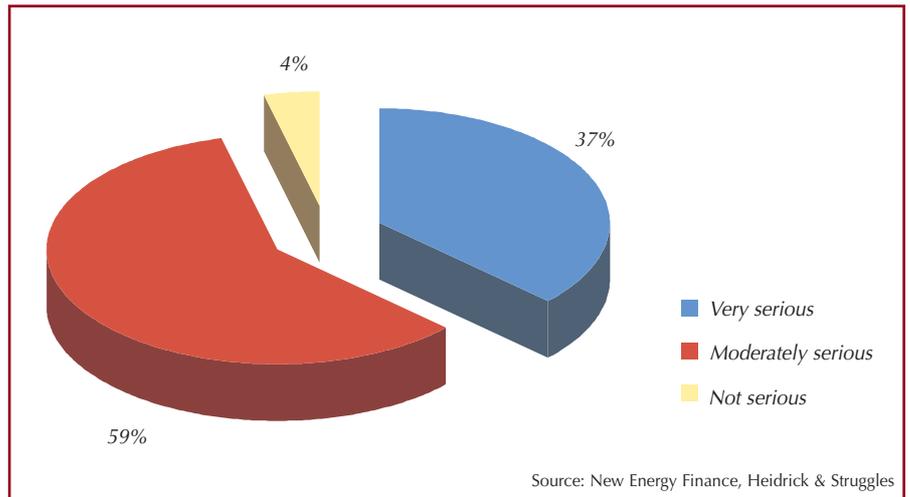


Figure 1. How serious is the recruitment challenge facing the alternative energy sector?

from different companies. These were spread widely in geographical terms, with 54% from Europe, 23% from Asia or Oceania and 23% from the Americas. Many of the respondents were executives with knowledge of the talent challenge in more than one continent – for instance, in both Europe and North America. Respondents were also distributed widely between sectors, covering everything from wind farm development, to solar cell manufacturing, from venture capital investment in clean energy to bio-fuel project execution.

OVERVIEW OF RESULTS

According to New Energy Finance data, based on its database of all the deals and projects done in renewable energy and energy efficiency, investment in the sector has increased very sharply since 2004.

New investment going into clean energy companies, technology and projects hit \$148.4bn in 2007, up no less than 60% on 2006 and up nearly fivefold from 2004's \$33.4bn. Clean energy is not a labour intensive sector, relying instead on heavy manufacturing of items such as wind turbines and solar panels and also on generating stations that employ many fewer people when operating than they do in the construction phase. Indeed the number of jobs created is likely to be much less, for instance, than those created in IT during the rapid expansion of that sector in the 1980s and 1990s.

To that extent, it might seem surprising that skills shortages would be a big problem for this sector. However the reality is that while most parts of the sector, other than bio-fuel feedstock cultivation and rooftop solar panel installation, do not



Gabriele Ghini (Partner – Heidrick & Struggles); Corrado Clini (Director General - Ministry of the Environment); Raffaele Chiulli (President – Saie); Tom Delare (Minister Counsellor for Economic Affairs - United States Embassy in Rome); Adriano Piglia (Research Centre Manager - Saie)



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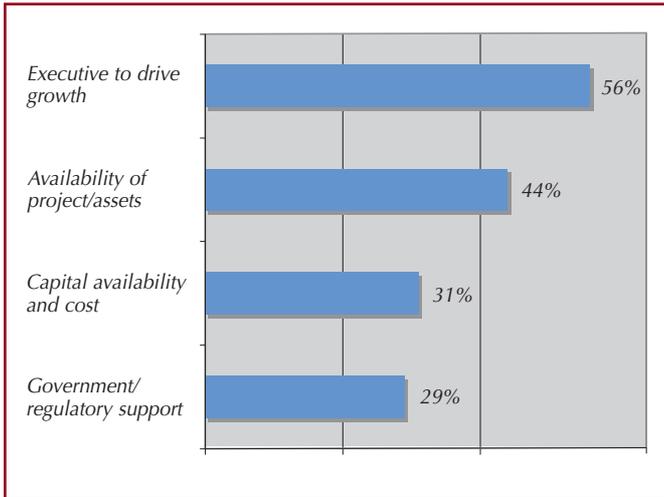


Figure 2. What do you consider your key challenges to delivering growth in the next 12-18 months?

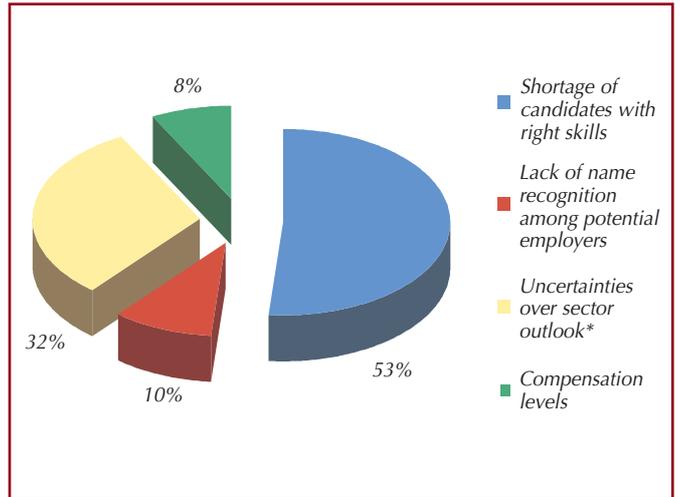


Figure 3. What are the main barriers to the recruitment of key personnel to the clean energy sector?

employ large numbers of workers, at this young, dynamic phase of its growth, clean energy is hungry for managerial, technical and entrepreneurial talent. Expansion rates anywhere near 2007's 60% imply that young, specialist companies with high technology, established but fast growing equipment providers and the clean energy arms of industrial and financial businesses inevitably need to expand their executive ranks substantially.

QUALITATIVE VIEWS FROM CLEAN ENERGY EXECUTIVES

The New Energy Finance/Heidrick & Struggles survey also collected valuable qualitative evidence from senior executives about the "War for Talent". Unsurprisingly, managers all had particular skill areas that caused them the most

recruitment concern. Some talked about the challenges of finding people for the very top positions in a growing business. One respondent defined the most difficult challenge as "finding experienced CEOs with international, business development and engineering skills"; while another said it was "recruiting the right CEOs and COOs for our portfolio companies". A third made this hard-hitting point: "Too many people in the industry have grown comfortable on a diet of patent filings and government grants. We seek to ally the necessary technical/industry knowledge with commercial/operational experience and sell product." Specialist knowledge and skills were also mentioned by many executives. One said: "The hardest positions to fill are people with good, solid

wind industry experience. Is there a skills shortage? Yes, there is. But there are also many talented people who want to be in the wind industry." Another bemoaned the shortage of "experienced bankers with a deeper understanding of the technical and financial issues in the renewable sector".

OUTLOOK

Many companies in the clean energy sector are experiencing an uphill struggle to recruit suitably skilled senior personnel. That much is clear from answers to the survey prepared by Heidrick & Struggles and New Energy Finance. Many firms are also worrying about retention of key managers, or anticipating that this will be a concern in the future. As specialist companies mature and grow larger, talent pro-

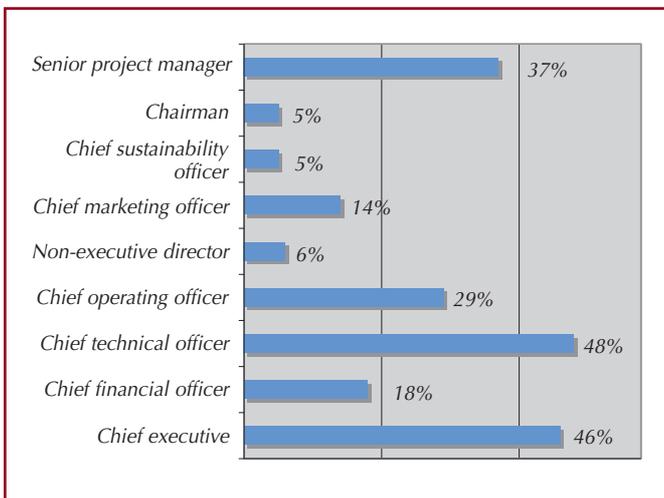


Figure 4. Which senior posts are most difficult to fill?

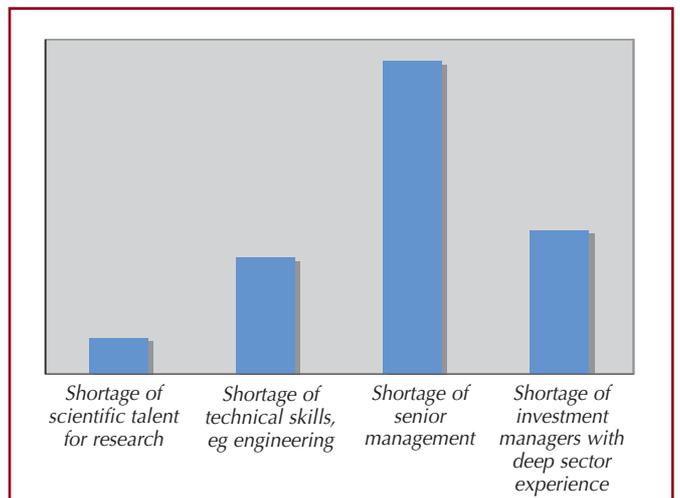


Figure 5. What is the biggest challenge with regard to talent, for your firm in the clean energy sector?

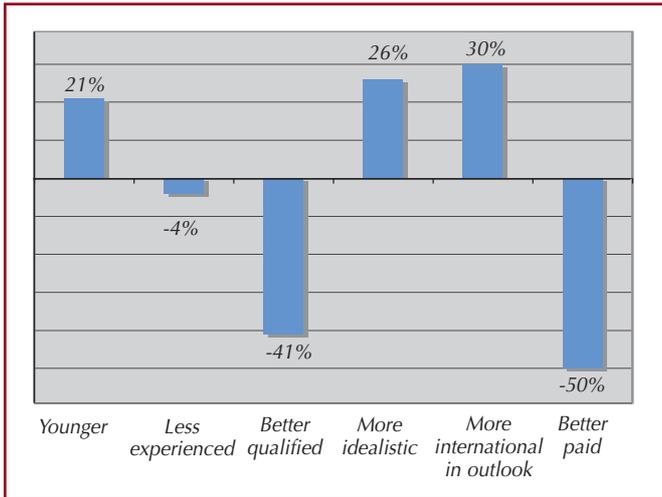


Figure 6. How do senior executives in the clean energy sector compare to those in other sectors?

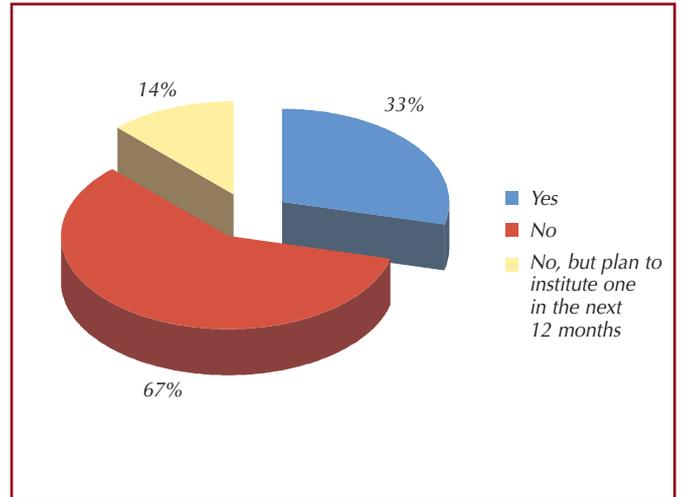


Figure 7. Does your company have talent programmes dedicated to assisting its growth in clean energy?

grammes are likely to become more common. Pay levels may also increase relative to those in slower growth sectors. One factor that might have a dampening influence on the talent issue is the ongoing world economic slowdown. Four years of unusually fast (5%) world economic growth have fuelled demand for top managers in many industries. If

world GDP growth slows to, say, 3% then other industries are likely to recruit fewer top personnel and likely to lose more people whose career ambitions remain to be realised. This would be more keenly felt in countries that actually do worse than the average, or even move into recession. A slackening in demand overall ought to play to the advantage of the

clean energy sector, which has very strong underlying growth fundamentals based on the fight against climate change and the need to ensure energy security. However that is likely to alleviate the issue only to some extent. Clean energy firms are likely to have to face the fact that in the next two or three years, the "war on talent" is likely to get fiercer. ■



Safe - Energy Resources and Environmental Sustainability – is a no-profit association, centre of excellence for energy and environment. Safe as independent and autonomous association, has the mission of promoting a new culture

in energy and environment sectors also through education and professional training. Safe main activities are:

- post graduate education
- scientific research and new technologies
- scientific forums
- workshops
- sustainable development

implemented in cooperation with:

- Companies
- Institutions
- Universities

- Research Institutes
- Professional Associations
- Media

Highly qualified professionals and a well established network, made up by leading public and private companies, as well as academic and research institutes help safe in achieving the following objectives:

- organize post graduate education in the energy and environment sectors
- organize conventions and workshops
- carry out studies and projects
- help qualified professionals to grasp challenging and rewarding job opportunities
- promote scientific research and application of new technologies
- facilitate information sharing among institutions, companies and universities



Safe Post-Graduate Programme in "Management of Energy Resources"

For almost 10 years Safe - Energy Resources and Environmental Sustainability - organizes the Post-Graduate Programme in "Management of Energy Resources" with the technical contribution and support of leading Companies of the Energy sector and in co-operation with prestigious Italian and foreign Universities and Government Institutions.

This initiative had in the previous editions the endorsement and support of the European Commission, the International Energy Agency, the Prime Minister, the Ministry of Productive Activities, the Ministry for the Environment, the Antitrust Authority and the Rome City Hall.

The Programme is designed to develop advanced technical skills in exploration, production and management of energy resources, with a strong environmental focus, and the relevant strategic, economic and legal framework for such activities.

The Programme is addressed to graduates and to professionals operating in the energy sector and stimulates the research and the application of

new technologies. This initiative promotes the communication between the Operators, both private and public, the Central and Local Authorities and represents a gathering point between Industry, Academia and Government Institutions. The course's Director is Dr. Raffaele Chiulli, Chairman of Safe.

The Programme spans seven months, with a total of about 700 hours of tuition, including lectures, meetings with top management, seminars, practical exercises, field trips, workshop and visits to operational sites. Post-graduate programme headquarters' is in Rome.

Lectures are given by a high profile group of professionals and managers from Energy and Service Companies, Institutions officers and professors. Lectures will be implemented with practical case-studies and field visits. The participants will therefore have the opportunity to experience the operational reality of the Energy Industry.

There are 25 places available to graduates who have obtained their qualifications from either an Italian or foreign University.