The Oil Drum
DISCUSSIONS ABOUT ENERGY AND OUR FUTURE

As technology itself gets more complex . . .

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It has only apparently been recently that China has stopped mandating where students would go to college, and what disciplines they would study. While this is a step forward for individual freedom it does have some down sides. This freedom to select which program to study also extends to Universities which can decide which programs to offer, and which not.

I mention this because, following the last energy shortage there was an increase in enrollment in what I will call the extractive energy related Departments (this way I don't have to list them all). Further there was some increased degree of financial support from industry and the Government. But that time was a long time ago. Student numbers have since dropped, and, as faculty retire, departments have shrunk in size. Since Engineering remains a relatively unpopular discipline in general for incoming Freshmen and is also one of the more expensive schools to fund, the situation has increasingly commonly been reached where Universities cut their losses and either close or merge away the Departments, and the ability to generate a resource disappears.

So it is that we hear that the current intake at one of the Australian Universities will be the last in Mining at that school. This will move Australia toward the European situation where Mining Education has become almost a thing of the past. While the situation is not yet quite this intense in the US we are moving in that direction. And, as the extractive industries have become more technically dependant, the staff to optimize use of the resource will not be available to supply this need as it now starts to ramp up significantly.

There are two levels to one industrial solution to this problem. At the introductory level it has previously been mentioned that graduating students are already seeing starting bonuses of around $10,000; what is now about to develop is the headhunting of the skilled professional at a higher level. In times of shortage this "raid the neighbor" approach has become the easy way to develop a skilled cadre. But it leads to signing bonuses that may rise to over $100,000. Though, as a recipient of one mentioned recently, you have to recognize that switching companies may well negatively affect pension plans and the like. Thus this level of incentive may no more than balance the indirect costs of the job change. Still if we are now going to be hunting the harder to find and extract oil we need ways to encourage not only Departments to recruit more students, and the faculty to teach them, at the state-of-the-art, but also a recognition by both the industry and the Universities themselves that this is a critical need that will negatively impact society in a number of ways if it is not met.

Being realistic, however, the chances of this happening are small. Universities tend to be very sensitive to suggestions on what they should do, while as a general rule, both government and industry just assume that there will be enough of a supply to go around. In much the same way as the general public assumes that we have plenty of oil, and when it runs short the government will find a way to solve the problem. And the government relies on new technologies, that must be developed by the engineers and scientists that are not now being recruited.

Ah, well.

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