Making the case

Plant engineers have serious value to add, way beyond their primary function. Brian Tinham talks to E.On's Ian Jackson about the need to stand up and be counted

As engineers, it's easy to spot engineering misconceptions, and not only among the general public, but promulgated by managers, finance people, regulators – you name it. Often, they don't matter much: they may even serve to pass the time with a little light amusement. But there are occasions when those misunderstandings, however apparently trivial, matter a great deal.

So the job for plant engineers, who do understand how things work and the implications of managers' decisions – or, for that matter, why some things can be done and others can't, unless (or even, if) money is thrown at them – is to find a way to pass that comprehension on in a digestible way. Pity then, that so few of us appear to do so. Sometimes that's about company hierarchies, frequently it's about opportunity, but maybe it also has to do with our ability to articulate concerns.

Ian Jackson (below), formerly a power station engineer, but now compliance manager with E.On and a member of the IPlantE professional sector council at SOE, believes passionately that conveying understanding is an undervalued role for engineers. He makes the point that it's not just about ensuring that organisations arrive at sound decisions around capital expenditure, automation projects, machinery upgrades or safety policies and procedures. In his experience, engineers can also influence contracts, and even mergers and acquisitions.

E.On's Ian Jackson: "Ask yourself: am I running this plant as well, as efficiently and as profitably as I can? We're the professionals, so are we enabling the business people, who effectively regulate us, to make the best decisions?"

He harks back to the early 1990s, when he was concerned with managing the relationship between Powergen, now E.On, and the electricity regulator, which included reconciling plant availability with forecast. "They wanted us to declare our annual availability in MW, but that's an instantaneous measure and they needed MWh. Yet the financial people, lawyers etc, had little or no engineering input, so they didn't know what they were signing up to."

It was similar, he says, when it came to understanding that, for example, oil-fired power stations can respond much more quickly to demand changes than coal-fired units – and also why they tended to be more reliable. "Without plant engineering advice, these decision-makers weren't in a position to do their jobs responsibly," he says.

His solution, at the time, was to organise plant tours and to work with those business people, explaining the issues.

Now, 15 years on and managing compliance, he says the boot is somewhat on the other foot – with part of his time spent discouraging engineers from reporting what they think management wants to hear and refocusing them on providing facts, along with explanatory notes. "You can spot 'spin' a mile off and it doesn't do engineering's reputation any good," he observes. "You've got to get reporting right and rise above the commercial drivers. We've all seen the results of not doing so – for example, in the water industry a couple of years ago, with Severn Trent getting fined £34.7 million by Ofwat."

Who runs your plant?

And, for him, there's little to choose between reports for regulators and those for financial auditors in the hard, commercial world. "It's very easy to think: 'I'm running the plant and this report is only for the money guys, so it doesn't matter'. But the fact is regulators will bite just as hard as anybody else. Also, there's no value in trying to be clever by dressing up your figures. When you're called in by the legal people, you better be right."

Which brings us back to our unsung duty as engineers. "Ask yourself: am I running this plant as well, as efficiently and as profitably as I can? We're the professionals, so are we enabling the business people, who effectively regulate us, to make the best decisions?" Because, if we're not, he says, we're partly to blame when the company doesn't do as well as it could or, worse, fails.

"In the power industry, I've heard people say we can't sync the machine within a window of five minutes. But do they mean it can't be done because it's too difficult? Or is it really more to do with 'this is the way we've always done things'? Have they considered why they are being asked to do something different? In my industry, over the years we've just had to become much more flexible. Gas-fired power plant, for example, used to run base load only, but now it's off and on all the time.

"Plant engineers need to have open minds, but they also need to stand up and let people know what can and can't be done, and why – and if that might change, if money became available. It's not about pet projects. We need to be heard and understood more, because we have value to add, in terms of professional, competent advice." PE