



# Salary Survey 2012

Analysis of the remuneration received by professional Chemical Engineers based in the UK and Ireland

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# Introduction

**In January 2012, IChemE conducted its biennial salary survey of members in the UK and Ireland. This report contains all of the salary data gathered and a short summary comparing the 2012 data to that of previous years.**

The survey was also extended to members in Australia, Malaysia, the US, Singapore, South Africa, Canada, India and New Zealand. Visit [www.icheme.org/shop](http://www.icheme.org/shop) to purchase the 2012 Australia salary survey.

The questionnaires were sent to eligible members electronically in January. 2654 members participated in the survey. 53% of participants were chartered members.

## Definitions

The basic measure of the survey is the median, which is the half way point: in any chosen group, 50% of the group earn more than the median, 50% earn less. The earning distributions of any group are likely to be skewed – that is, a few in the group may earn very high salaries – but it is unlikely that many earn much less than the salary offered to new graduates. Because of the skew, the average or mean is likely to be higher than the median. The median therefore gives a fairer indication of what a typical member of the group is earning.

Within any group, 10% are paid less than the first decile, 50% are paid more than the median, and 10% are paid more than the ninth decile.



# Summary

## Summary of key findings

### Salaries and Progression

The median salary for chemical engineers is £53,000/y (2010: £50,000/y). Since 2002, median salaries have increased by 33% (see chart 1). The median salary for 2011 graduate chemical engineers is £27,861 (2010 figure: £27,500/y) making the sector one of the best paid graduate destinations.

### Gender Gap

The percentage of female members participating in the survey is unchanged at 18%. Median salaries for women are largely identical to male counterparts in the earlier career stages but widen markedly beyond the age of 35. Caution is advised however due to lower sample sizes of older, female chemical engineers.

### Educational

The median salaries of Chartered Chemical Engineers with a first degree (£70,000/y) are higher than those with masters (£63,000/y) and doctorates (£61,000/y). At associate level those with a first degree (£47,250/y) again out-earn those with a doctorate (£40,000/y) and masters (£35,000/y).

### Industry Differences

Median salaries are highest in the oil and gas exploration and production sector (£72,000/y), followed by oil refining (£61,000/y), contracting (£60,164/y) and petrochemicals (£60,448/y). Graduate chemical engineers that participated in the survey had most commonly secured employment in the oil and gas exploration and production, chemical and allied products, and consultancy sectors.

### Effect of Job Role

Survey participants working in a finance or financial services role reported the highest median salary of £100,250/y. Whilst the relatively small sample size (32) means that caution is advised, the figures do suggest significant pay improvements in the financial sector. The 2010 median salaries for those in the same type of work was £78,500/y.

Elsewhere, survey participants working in a design role reported a median salary of £50,000/y (2010: £46,431/y). Those working in a manufacture and production role saw median salaries increase to £53,000/y (2010: £48,500/y) and those working in a research and development role reported median salaries of £42,000/y (2010: £40,000/y).

### Regional Effect

The best paid chemical engineers can be found in London where median salaries of £62,500/y were reported. Survey participants based in the South East (£60,725/y), South Central (£59,600/y) and Ireland (£57,435/y) reported the other highest median salaries.

### Additional Benefits

44% of survey participants reported a company final salary or defined benefit pension – down from 56% in 2010. Conversely, company money purchase pensions were up to 37% compared to 30% in 2010 and 12% of participants reported no pension related benefits.

74% of participants reported that their employer paid their IChemE membership fees.

# Analysis

Chart 1 – Chemical Engineering Salary Trends 1996–2012

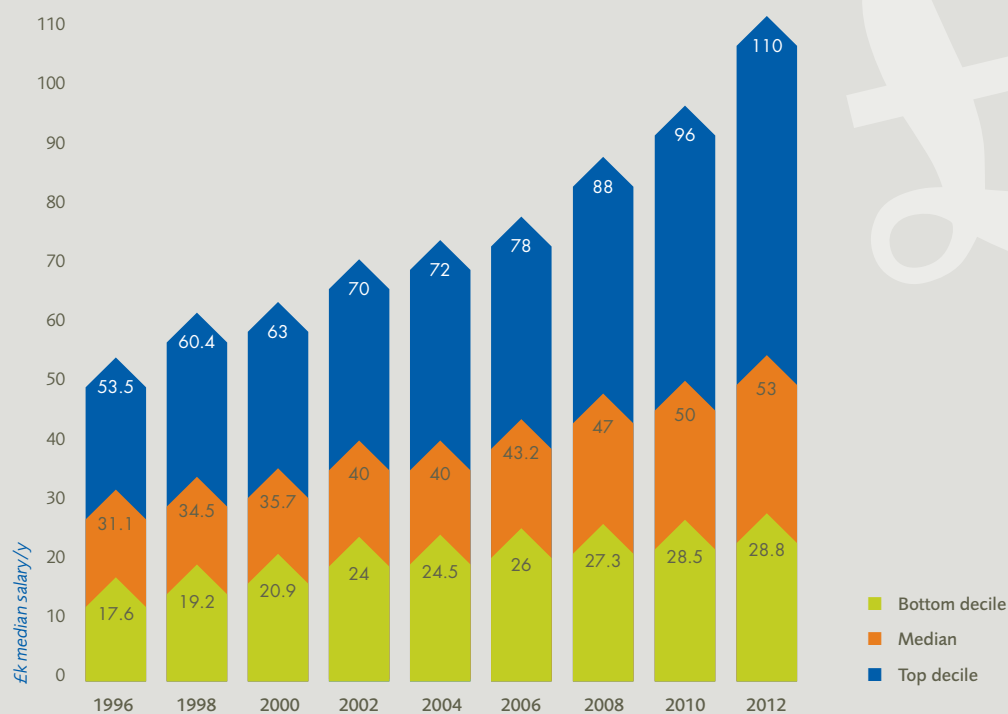
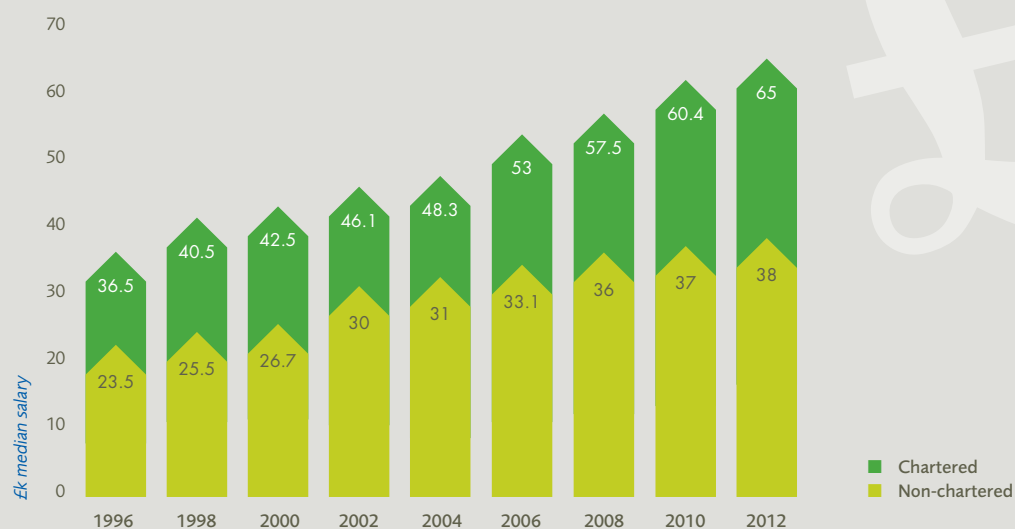
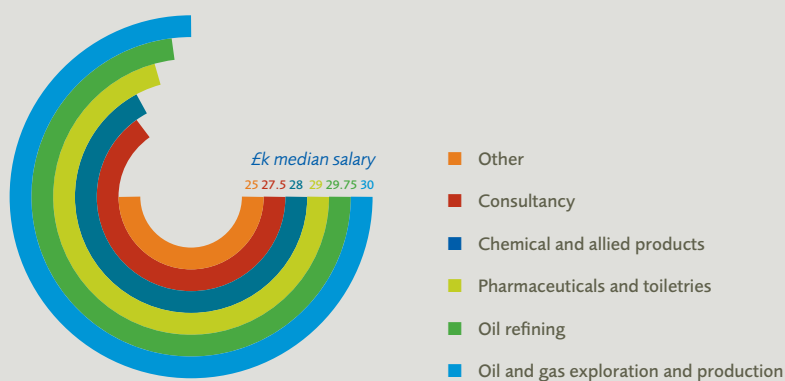


Chart 2 – 'The value of the letters': Median salaries for IChemE chartered and non-chartered 1996–2012

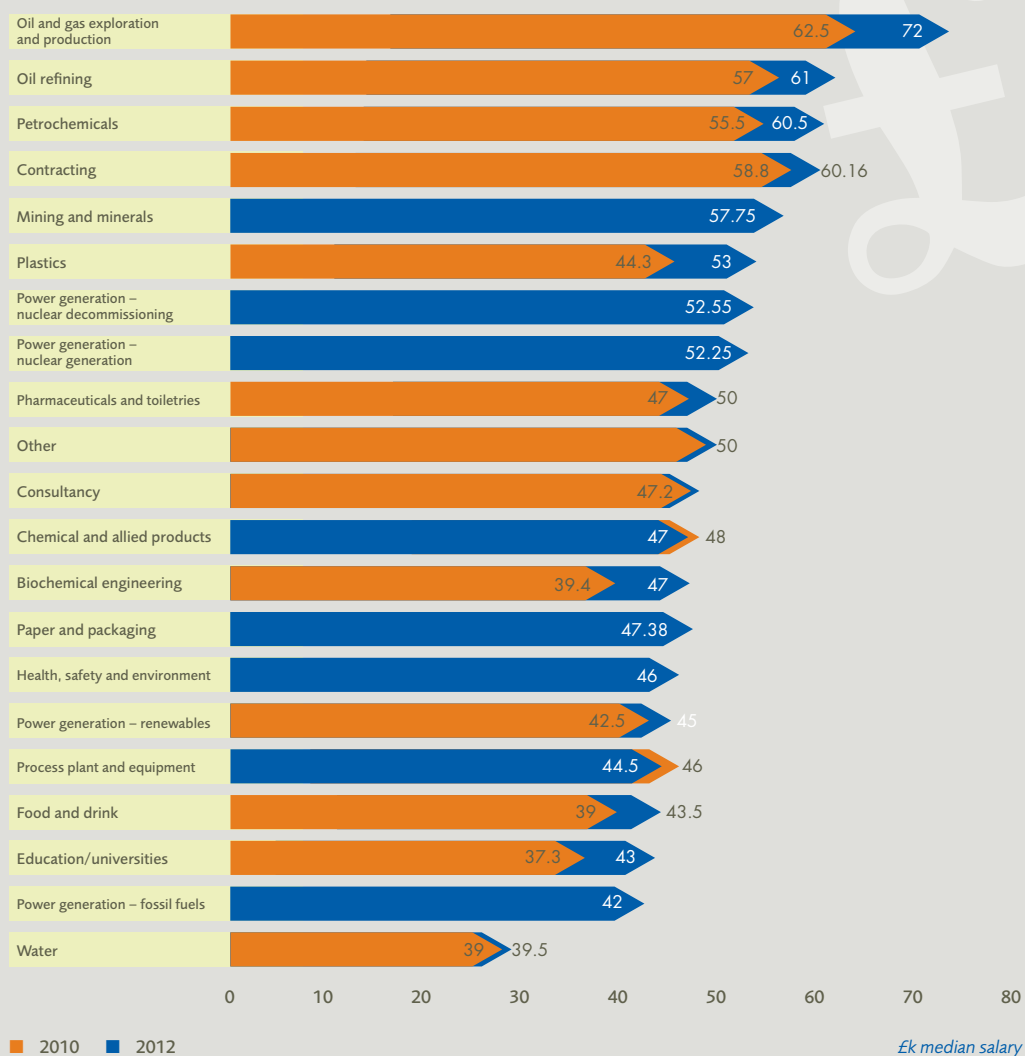


# Analysis

## Chart 3 – 2011 graduate salaries by industry sector



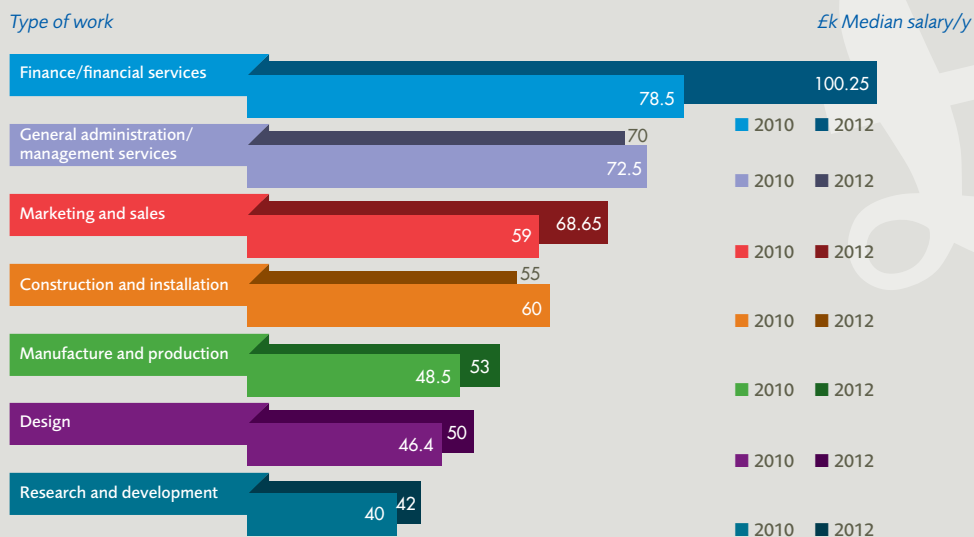
## Chart 4 – Comparison by industry sector 2010–11





# Analysis

## Chart 5 – Comparison by type of work 2010–2012



## Chart 6 – Median salaries by region



# Analysis

Chart 7 – The gender gap: male and female salaries compared by age



Chart 8 – Chartered v non-chartered earnings by age band



# IChemE UK and Ireland 2012 Salary Survey

## 1. What is your grade of IChemE membership?

- Chartered Member or Fellow
- Associate member
- Other

## 2. What is your gender?

- Male
- Female

## 3. What was your age on 1 January 2012?

- Under 25
- 25-29
- 30-34
- 35-39
- 40-44
- 45-49
- 50-54
- 55-59
- 60-64
- 65+

## 4. What is the highest qualification you have attained?

- Doctorate
- Master's Degree
- Bachelor's Degree
- Non-graduate, diplomas etc

## 5. When did you graduate?

- In 2011
- Before 2011
- Non-graduate

## 6. In which of these areas is your primary place of work?

- Scotland
- North East
- North West
- Midlands
- South Central
- East Anglia
- South West
- South East
- London
- Wales
- N Ireland
- Ireland

## 7. What is your level of responsibility?

- Engineering technician
- Graduate in training/ Engineer in training/ Post Doctoral
- Engineer/Supervised team member/Lecturer
- Senior engineer/Senior lecturer
- Project manager/Site manager/Professor/ Associate professor
- Senior manager/Director/Dean/ Head of department
- Chairman/Managing director/Chief executive/ Vice chancellor
- Consultant
- Other

## 8. What is the main sector in which you work?

- Biochemical engineering
- Chemical and allied products
- Consultancy
- Contracting
- Education/Universities
- Food and drink
- Health, safety and environment
- Mining and minerals
- Oil and gas exploration and production
- Oil refining
- Paper and packaging
- Petrochemicals
- Pharmaceuticals and toiletries
- Plastics
- Power generation – fossil fuels
- Power generation – nuclear decommissioning
- Power generation – nuclear generation
- Power generation – renewables
- Process plant and equipment
- Water
- Other

# IChemE UK and Ireland 2012 Salary Survey (continued)

## 9. What is your main type of work?

- Construction and installation
- Design
- Education and training
- Finance/financial services
- General administration/management services
- Manufacture and production
- Marketing and sales
- Research and development
- Other

## 10. What is the status of your employment?

- Full time (120 hours or more per month)
- Part time (less than 120 hours per month)

## 11. How many hours per 4 week period did you typically work in 2011?

## 12. What was your total earned income, before tax, in 2011?

## 13. What pension related benefits in kind do you receive from your employer?

- Company final salary/defined benefit pension
- Company money purchase pension
- Non contributory pension
- Superannuation
- Central Providence Fund
- 401k savings plan
- None

## 14. What other benefits in kind do you receive from your employer?

- Medical insurance
- Car
- Loans
- IChemE membership fees
- Other professional membership fees
- Childcare
- None
- Other

# Salary survey notes

## II. Level of responsibility

- **Engineering technician:** A member in employment, likely to be working in a process engineering support role such as technician or operator but without a formal chemical engineering undergraduate degree-level qualification.
- **Graduate in training/Engineer in training/ Post doctoral:** A member in employment receiving training. Work is defined in detail and calculation and designs are subject to checking.
- **Engineer/Supervised team member/Lecturer:** A member who has completed practical training and now works in a chosen field, generally as a member of a project team, or supervised by a section leader - spot checks are made on the work, may have technicians or artisans reporting to him or her for experimental work.
- **Senior engineer/Senior lecturer:** A member working alone or as a member of a project team with responsibility for the major part of the project. Only work affecting major areas of safety are checked, responsibility for expenditure within the budget. In addition, one who is a senior teacher or lecturer at a college or university with responsibility for a particular course or subject.
- **Project manager/Site manager/Professor/ Associate professor:** A member working as a section leader/project manager with responsibility for a major project or section including responsibility for the work of the section and for expenditure, i.e. sets the budgets for subordinates. Also professor.
- **Senior manager/Director/Dean/Head of department:** A member working as a manager or director with responsibility for several sections/projects, responsible for expenditure and profit as well as technical aspects of the project. In addition, one who is a vice-principal at a college or head of department or dean at a university.
- **Chairman/ Managing director/Chief executive/ Vice chancellor:** A member working as a managing director or chief executive with total responsibility for policy, technical and administrative work, or one who is principal of a college or vice-chancellor of a university. ("The buck stops here").
- **Consultant:** A member who is either self-employed, or employed by others, providing professional advice and services to another party (client).

## II. Total earned income - salaried employment

Please enter the rate of annual earnings in the specified currency on the 1st January 2012 from salaried employment in accordance with the notes below:

1. Income Tax and National Insurance contributions or contributions you make under a group superannuation scheme should be included.
2. Any insurance or superannuation contribution paid by an employer should be excluded.
3. Benefits in kind (e.g. employer contributions to pension schemes, use of car, sickness or accident insurance cover, accommodation at a nominal rent) should be excluded.
4. "Current Annual Salary" should be taken to mean:
  - a) the basic rate of annual salary received from the sole or principal employer on 1st January 2012 plus.
  - b) bonus payments including "thirteenth month" payments. Director's or manager's fees, share of profits, commission, and other honoraria received from the sole or principal employer, during 2011.
5. Refunds of expenses incurred should be excluded.



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