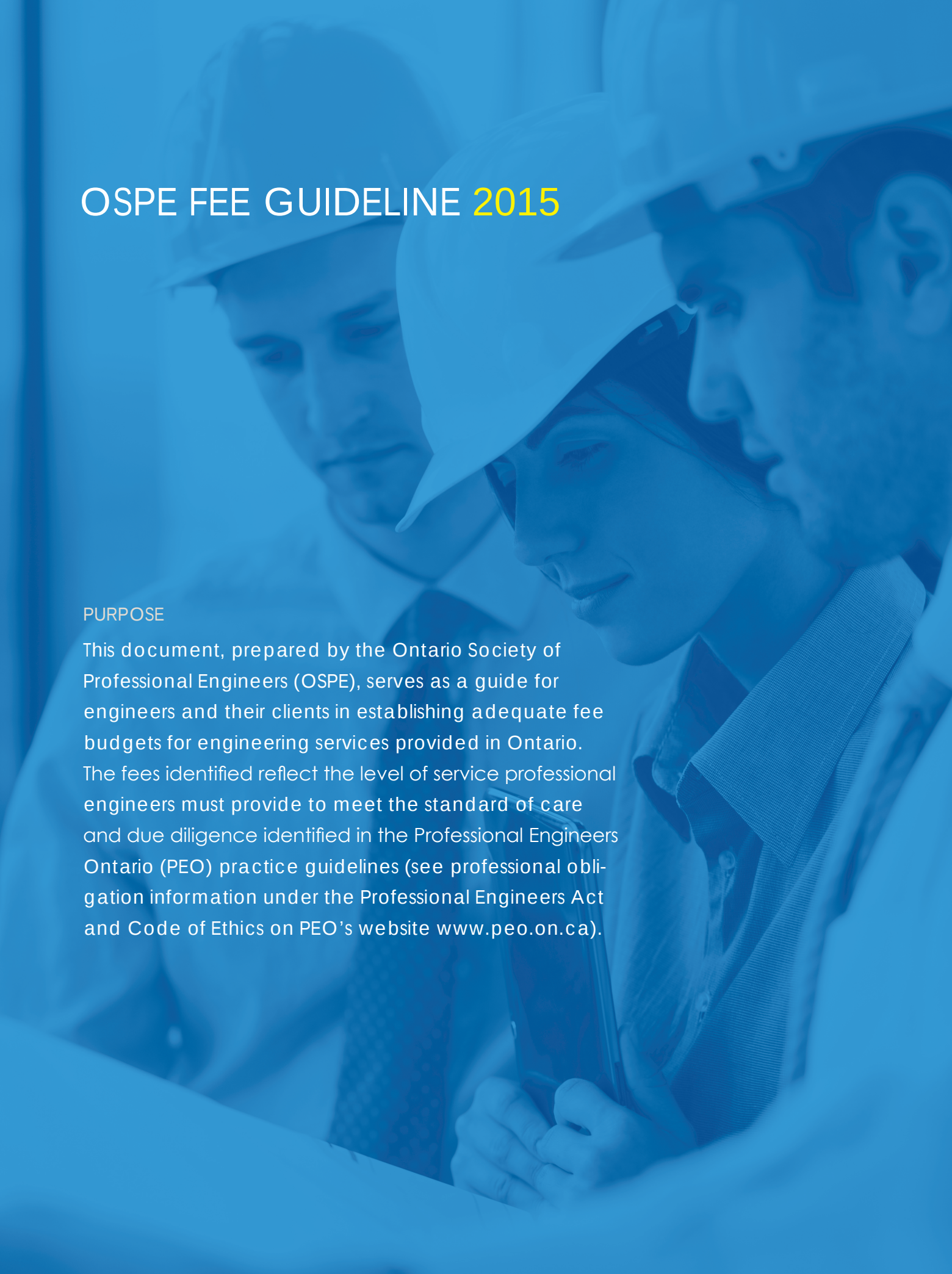


A blue-tinted photograph of three professional engineers wearing white hard hats and safety glasses, looking down at a set of plans or documents. The image is used as a background for the document header.

OSPE FEE GUIDELINE 2015

PURPOSE

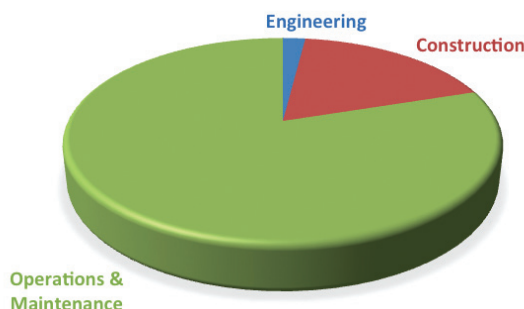
This document, prepared by the Ontario Society of Professional Engineers (OSPE), serves as a guide for engineers and their clients in establishing adequate fee budgets for engineering services provided in Ontario. The fees identified reflect the level of service professional engineers must provide to meet the standard of care and due diligence identified in the Professional Engineers Ontario (PEO) practice guidelines (see professional obligation information under the Professional Engineers Act and Code of Ethics on PEO's website www.peo.on.ca).

BACKGROUND

Selecting an engineering service provider is one of the most important decisions a client makes. The success of any engineered project relies on obtaining the most suitable engineering expertise, so selecting the most qualified firm will result in a well-planned and designed project.

A successful project is one which meets the requirements of the client at the lowest sustainable project lifecycle cost. The long term operation and maintenance of infrastructure, building or industrial assets should be 80-93 per cent of the asset's life time costs. At 1-2 per cent of total costs, engineering is a relatively small percentage.

However, the role of the engineer is pivotal in meeting the client's objectives, because it is during the design process that construction, operations and maintenance cost savings are most easily achieved. Selecting engineering services for the apparent least cost is often false economy, and can be a disservice to the project and the client.



Please note: Operations & Maintenance in the chart refers to/ includes reception, sales, clerical and accounting staff; computers, rent, utilities, maintenance, property taxes, insurance, professional fees, training, supplies, dues and registrations.

TYPICAL COMPOSITION OF ENGINEERING FEES

Engineering fees are based on both the value of the professional services that are provided to a client, and the costs of providing those services. Each engineering firm has a unique mix of professional engineers, engineers-in-training, and technical and administrative staff that support the professional services offered by the firm. In order to provide these professional services to clients, each firm incurs a range of costs in the course of maintaining its business. A pie chart below shows the cost makeup of a typical engineering services provider. However, professional engineering fees should be based on the value of services received by the client and not simply the engineer's cost of providing the services.



Please note: Overhead above includes computers, rent utilities, maintenance, property taxes, insurance, professional fees, training, supplies, dues and registrations

Net Profit – for investment, retained earnings, shareholder equity

Salaries, Wages – pay for services provided as per arranged rates

1.0 METHODS OF REMUNERATION

The three most common methods of calculations are as follows. Please note that other agreements can be made by using a combination of these methods, or by using other financial models.

Method 1.1 – Fixed Fee or Lump Sum

A lump sum arrangement is recommended in situations when the scope of services and schedule can be clearly defined and understood.

Fees of this type are typically developed by estimating the amount of time required to complete the project multiplied by the respective hourly rates, or by estimating the fees based on previously completed projects of similar scope and complexity.

The engineer assumes a risk to perform the work within the fixed fee offered. The engineer's return for assuming this risk is built into the fixed fee, and therefore a breakdown is not usually provided.

Method 1.2 – Time Basis

A time and material arrangement is recommended in situations when the scope of services and/or schedule cannot be clearly defined. Rather than commit to an upset limit which imposes a fixed return for unknown risks, it is recommended that the engineer monitor fees and provide the client with regular status and forecast updates.

Table 1: Hourly Rates for Professional Engineers

Responsibility Level	Targeted Hourly Rates*
Level A	\$130
Level B	\$145
Level C	\$175
Level D	\$215
Level E	\$240
Level F	\$300

*The rates listed in Table 1 have been derived with sustainability of the profession in mind. A particular project may warrant rates which are higher or lower than those shown. Complex or very specialized projects, or those requiring expert testimony or relocation of staff to distant locales may result in higher rates. Lower rates may be appropriate for larger projects or long-term contracts. Regional economic situations may also affect rates.

Table 2: Typical Duties Based on Responsibility Levels*

Level of Responsibility	Duties
Level A	• Receives training in office, plant, field or laboratory engineering work as classroom instruction or on-the-job assignments. • Tasks assigned include preparation of simple plans, designs, calculations, costs and bills of material in accordance with established codes, standards, drawings or other specifications. • May carry out routine technical surveys or inspections and prepare reports.
Level B	• Normally regarded as a continuing portion of an engineer's training and development. • Receives assignments of limited scope and complexity, usually minor phases of broader assignments. • Uses a variety of standard engineering methods and techniques in solving problems. • Assists senior engineers in carrying out technical tasks requiring accuracy in calculations, completeness of data, adherence to prescribed testing, analysis, design or computation methods.
Level C	• This is typically regarded as a fully qualified professional engineering level. • Carries out responsible and varied engineering assignments requiring general familiarity with a broad field of engineering and knowledge of reciprocal effects of the work upon other fields. • Problems usually solved by combination of standard procedures, modification of standard procedures, or method developed in previous assignments. • Participates in planning to achieve prescribed objectives.
Level D	• First level of discreet and sustained supervision of other professional engineers OR the first level of full specialization. • Requires application of mature engineering knowledge in planning and conducting projects, having scope for independent accomplishments and coordination of the difficult and responsible assignments. • Assigned problems make it necessary to modify established guides, devise new approaches, apply existing criteria in new manners, and draw conclusions from comparative situations.
Level E	• Usually requires knowledge of more than one field of engineering OR performance by an engineering specialist in a particular field of engineering. • Participates in short and long-range planning; makes independent decisions on work methods and procedures within an overall program. • Originality and ingenuity are required for devising practical and economical solutions to problems. • May supervise large groups containing both professional and non-professional staff; OR may exercise authority over a small group of highly qualified professional personnel engaged in complex technical applications.
Level F	• Usually responsible for an engineering administrative function, directing several professional and other groups engaged in interrelated engineering responsibilities; OR as an engineering consultant, achieving recognition as an authority in an engineering field of major importance to the organization. • Independently conceives programs and problems to be investigated. • Participates in discussions, determines basic operating policies, devises ways of reaching program objectives in the most economical manner and meets any unusual conditions affecting work progress.

*These responsibility levels are identical to those used in OSPE's annual Employer Compensation Survey.

Method 1.3 – Percentage of Construction Cost

For assignments where the engineering scope of services has been established over many similar projects and is very well defined, fees can be derived as a percentage of the construction cost. With this method, the fee is not based on the number of hours spent on the project.

Table 3 presents two types of fees as a percentage of construction cost, based on the services to be included in the fee:

- Percentage fees for engineering design services only; and
- Percentage fees for engineering design, contract administration and project management services.

The percentages shown in Table 3:

- Were developed on the basis of historical data reported by Professional Engineers Ontario and on survey data received from professional engineers and clients;
- When multiplied by the construction cost, should provide fair and equitable compensation for engineering services; and
- Apply to engineering projects in undeveloped areas where complexity is not introduced by existing structures.

It is suggested that the fee for alterations and/or additions to an existing structure be calculated at 150 per cent of the fees calculated using the percentages in Table 3. An additional fee should be negotiated for services related to demolition work.

Table 3: Fees as a Percentage of Construction Cost

Cost of Construction	Engineering Design Services, Contract Administration and Project Management (%)	
	Engineering Design Services Only (%)	Engineering Design Services, Contract Administration and Project Management (%)
Less than \$500,000	A method other than fees as a percentage of construction costs should be used	
\$500,000 - \$1,000,000	6.2	23
\$1,000,000 - \$2,000,000	5.7	20
\$2,000,000 - \$5,000,000	5.2	18
\$5,000,000 - \$10,000,000	5.0	16
Over \$10,000,000	4.6	14

For the purpose of calculating fees, Cost of Construction means the contract price(s) of all elements of the project designed by, or on behalf of, the professional engineer, including the general contractor's overhead and profit and all applicable taxes, except HST. Where there is no contract price for all or part of a project, the construction cost should be estimated by the professional engineer and agreed to by the client.

2.0 CHARGES TO DISBURSEMENT

Minor disbursements are normally part of overhead and are not charged separately. These may include:

- Local communication costs (phone, cellphone, fax, etc.);
- Long distance phone expense;
- Routine production of drawings and documents;
- Local travel expenses (up to 25 km from office);
- Courier and messenger services;
- Standard software and computer costs; and
- Office supplies.

Other disbursements are recommended to be charged at cost plus 10-20 per cent. These may include:

- Travel beyond the local area, or vehicle rental and fuel costs;
- Living expenses for personnel approved by the client;
- Project-related advertising costs;
- Specialized, project-specific computer software and/or services;
- Use of specialized equipment;
- Testing services;
- Approvals, permits, licences, and specific taxes applied to fees;
- Project-specific insurance if required by the client;
- Any other third party expenses paid by the consultant on the client's behalf; and
- Tender documents and other non-routine documents.

Sub-consultant invoices are recommended to be charged at cost plus 10-20 per cent.

The client and the consultant should review the projected expenses prior to the start of the project and agree on the applicable disbursements category and reimbursement methods.

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